

From 2015 Philmont 2015 Guidebook to Adventure, Pages 12-23, (with Troop Expedition Leader Notes)

TIPS ON EQUIPMENT AND CLOTHING

Tents

Due to the terrain, wildlife, and sudden change in weather conditions, tents are a required shelter for a Philmont trek and therefore all crew members are required to sleep in a tent. Bivy sacks are not acceptable. Every member of your crew should be able to set up, take down, and fold the tent. Philmont has 2 person backpacking tents (footprint 5'6" x 7'6", approximate weight = 6 lbs, 3 oz) available for your use at no charge. If you choose to provide your own tent it must be a two-person tent and free of all food smells. If you think your tent may have been compromised by food smells, please use a Philmont tent. Philmont will allow a single person tent in the event of an odd numbered crew.

Philmont has begun to introduce a new free-standing backpacking tent in cooperation with Cascade Design and MSR. The tent is called "Thunder Ridge". It requires 6-8 stakes and weighs 5lbs, 13oz. A crew may be able to select these tents if they are available at the time the crew checks out equipment at Outfitting Services. No pre-reservations are available. (1500 tents will be available in 2015.)

Space for tents in most campsites is limited. Use of two-person tents minimizes the footprint and avoids encroaching on the "Bearnuda" Triangle (page 31). Two one-person tents take up nearly twice as much space as one 2-person tent. A 6' x 8' waterproof ground cloth must be used under each tent. These are not provided with the Philmont tents.

Packs

A sturdy, well-fitted pack is essential for backpacking at Philmont. All of your personal gear, plus your share of food and crew equipment will need to fit inside your pack. There are many choices of packs and having a pack fitted to your body with appropriate sizing of shoulder straps and hip belt is essential.

Whether you choose an external or internal frame, there is a method for packing that is basic to all. Nearly all backpackers stow their sleeping bag in the bottom of the pack. This is also a good place for other items you won't need until you make camp at night: sleepwear, camp pillow, sleeping pad. Internal frame packs should have heaviest items placed on top of the sleeping bag and centered in your pack. For external frames, the heaviest items should be placed at the top and against the frame of the pack near your shoulders.

All items in your pack should be neatly organized and packed in waterproof bags or stuff sacks. Your map, compass, sunscreen, raingear, camera, and first aid kit should be readily accessible. A waterproof rain cover is recommended to keep your pack dry at night and while hiking in the rain.

Check your pack weight. 20 - 25 pounds without food is preferred. Comfortable pack weights vary considerably with physical condition, age, and experience. Your training hikes will help you find out what is best for you. As a regular rule of thumb, a fully loaded pack should not exceed 25-30% of your body weight.

With your pack fully loaded, practice putting it on your back by first balancing it on one knee with the pack straps facing you, slip your nearest arm through the appropriate strap and smoothly swing the pack behind you, reaching down and back to slip your free arm through the second strap and jiggle your pack into a comfortable position.

If you are unsure of your pack's fit or question the durability for Philmont's trails, you can rent either an internal or external pack at Philmont for a fee of \$18 for the duration of the trek. Our knowledgeable staff will fit you in the appropriate pack at Philmont and pre-reservations are not necessary.

Be Prepared for Extremes of Weather

Be prepared for extreme weather variations at Philmont. Afternoon temperatures in low valleys can be hot (100 degrees or more), and night temperatures high in the mountains may drop to freezing.

Philmont can be extremely dry and then a sudden downpour will soak everything. Periods of rain lasting several days may occur. Fortunately, New Mexico's low humidity allows wet clothing and gear to dry quickly after the rain stops. **Rain occurs most frequently in the afternoon and may last an hour, all night, or several days.** Small hail or sleet often accompanies rain. Mountain weather is fickle—anything can happen and often does. Snow is possible, even during the summer.

Weather conditions vary from one area of the ranch to another depending upon elevation, terrain and irregular weather patterns. **You should be prepared for all of the above weather conditions.**

Clothing

During cold periods, it is especially important to stay dry since wet clothing loses much of its insulating value (90 percent or more). Several light layers of clothing are better than one heavy layer since air trapped between layers of clothing provides a high degree of insulation. As the atmosphere warms you can remove one layer of clothing at a time for proper body heat management. Keep in mind that wool and synthetics insulate when wet. Down or cotton layers such as sweatshirts and sweatpants drain body heat when wet, and dry very slowly. While the official BSA uniform is highly recommended for use when traveling to and from Philmont and wearing at base camp, you may choose to wear other clothing on the trail. Long pants are recommended for cold nights and are required for horseback riding, conservation projects, and pole climbing at logging camps. Shorts and short-sleeved shirts will generally be sufficient during the day; however, a sweater or fleece jacket is necessary for cold mornings and evenings and possible downpours of rain or hail.

To be comfortable and dry during rain, a good quality rain suit is essential. Inexpensive vinyl rain suits or ponchos will not hold up under extended use. A poncho is not adequate. You should have a durable rain jacket and pants.

Money

Campers spend an average of \$100 at Philmont's trading posts. If major items such as jackets are desired, more money will be needed.

\$20 - \$50 should cover most expenses on the trail. Money taken to the backcountry should be in small bills. These expenses may include:

- Shooting Programs: Three shots are free at Philmont's .30-06, shotgun, and muzzle loading programs, and five shots at the Cowboy Action Shooting program. Depending on availability, additional rounds may be purchased.
- Healthy trail snacks, root beer, repair items and replacement equipment, etc.
- Fuel for stoves.

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Sleeping Bags

Your sleeping bag should be warm (suitable for temperatures down to 25 degrees), but less than 5 pounds. You can increase the R value (temperature rating) of your bag by using an insulated pad under your bag or wearing long underwear and a hat. When your sleeping bag is packed it should be no more than 20 inches long and 10 inches in diameter, and it should weigh 5 pounds or less. Use a waterproof stuff sack to store your sleeping bag or if you do not have one, line the stuff sack with a heavy-duty (4 to 6 mil) plastic bag safely secured. This will keep your sleeping bag dry even in wet weather.

Boots

High quality hiking boots that are broken-in are required for the trails at Philmont. Your trek will cover uneven rocky surfaces and steep trails. Hiking boots that fit properly and are broken in will prevent injury.

It is imperative that you are fitted properly for hiking boots. Visit your local outdoor store and the sales staff will be happy to help you.

You will also need a pair of lightweight, closed toe shoes for use around camp and occasionally when hiking without your pack. These will also be used when rock climbing, riding horses and biking.

Sandals are not recommended but can be used in campsites only.

Socks

The socks you wear on the trails will have a significant effect on your experience. Just like boots, choose your socks carefully. Socks for backpacking are designed to provide cushioning and abrasion resistance as well as warmth. You should choose socks made of synthetic materials or wool. There are 3 categories of socks:

Liners: These are thin wicking socks that you wear next to your skin. They keep your feet dry and comfortable and are meant to be worn underneath other socks.

Lightweight Hiking Socks: These socks stress wicking performance over warmth. They are relatively thin so that you stay comfortable on warm weather trips. They can be worn with or without sock liners.

Midweight hiking socks: These socks are thicker and warmer than the lightweight hiking socks. Many have extra padding built into the heel and the ball of the foot for maximum comfort. They can be worn with or without liners.

Socks can add volume to your footwear. When you are fitted for your boots, make sure you wear the socks you have chosen to wear on your trek.

YOUR PERSONAL EQUIPMENT

Labels: Be sure to label all of your clothing and equipment with your name and Expedition Number, 622-D, so you can readily identify what is yours and so any of your belongings lost and found can be returned.

LOWER BODY LAYERS

You will need 1-2 synthetic insulating layers. All must fit comfortably over each other so they can be worn in combination.

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Base Layer (mid-wgt) synthetic	1	long underwear bottom	T	
Rain Pants	1	lightweight & sturdy	T, A	
Long Pants	1	no heavy jeans		
Underwear	3		T	
Hiking Shorts	2		T	

UPPER BODY LAYERS

It is imperative to layer your clothing, combining different garments to achieve protection from the elements and optimum insulation. Synthetic or wool layers are recommended as they insulate when wet. Avoid cotton, as it does not insulate when wet.

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Base Layer (mid-wgt) synthetic	1	long underwear top	T	
Middle Layer (fleece pullover)	1	opt - wool sweater	T	
Top Layer (synthetic jacket)	1	wool or polar fleece ok	T	
Rain Jacket	1	sturdy, waterproof jacket w/hood, coated nylon and breathable fabrics acceptable.	T, A	
Shirt - Short Sleeve	2	moisture wicking no cotton or nylon	T	
Shirt - Long Sleeve	1	moisture wicking no cotton or nylon	T	
Sports Bra	2	synthetic	T	

HEAD-NECK-HAND

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Wool or fleece hat	1	warm hat for cold temps	T	
Glove liners or mittens	1pr	synthetic wool	T	
Baseball cap or wide brim hat	1	sun protection of ears, face		

PACKS AND BAGS

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Backpack- rental available (\$18)	1	internal frame 75L +/- 4600 cu in. External frame 65L +/- 3966 cu in.	T	
Summit/Daypack	1	side hikes	T, S	
Lashing Straps	1 pr	holds sleeping bag on pack	T	
Gal. Ziploc Bags	6-12	pack clothes	T	
Pack Cover	1	waterproof	T	
Small Stuff Sacks	2-3	pack/organize personal items	T	
Ditty Bags	2-3	pack/organize personal items	T	

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SLEEPING GEAR

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Sleeping Bag	1	rated 20 degrees and less than 5 lbs/packed in compression sack lined w/plastic bag	T	
Waterproof Stuff Sack	1	Or 2 heavy duty 4-6 mil plastic bags	T	
Sleeping Pad	1	closed-cell foam or fully inflatable pad	T	
Sleep Clothes	1 set	worn only in sleeping bag-t-shirt & gym shorts acceptable.	T	

FOOTWEAR

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Boots	1 pr	well broken in	T	
Socks	3 pr	synthetic or wool	T	
Liner Socks	3 pr	synthetic	T	
Camp Shoes	1 pr	lightweight sneakers	T	

MISCELLANEOUS ITEMS

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Bowl	1	deep bowl of lightweight material	T	
Mug/Cup	1	measuring style recommended 12-20 oz	T, O	
Spoon/Spork	1	Lexan or lightweight-sorks are popular	T	
Water Bottles/1 qt	4 or more	qty reduced if also using hydration bladder in pack	T, A, BB	
Pocket Knife	1	small knife sufficient	T, A, S	
Matches/Lighter	1	pack in waterproof container/lighting camp stove	T, A, BB, S	
Flashlight/Headlamp	1	durable/lightweight-bring extra batteries	T	
Trekking Poles w/rubbert tips	1 pr	reduce impact - 25% - knees & ankles, improve balance	T, O	
Philmont Map	1	sectionals available for your itinerary or overall	T, A, S	
Compass	1		T, A, S	
Bandana/tubular headgear	2	bandanas or headgear also known as Buffs work well/ many brands on the market	T, BB	
Money	\$50	ATM in Base	BB	
Lip Balm	1	moisturizing balm w/SPF 25 or greater	T, A, BB	
Soap	1	Biodegradable	T, BB, S	

MISCELLANEOUS ITEMS (continued)

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Toothbrush	1	trial size	T, BB	
Toothpaste	1		T, BB, S	
Camp Towel	1	small, quick dry	T	
Personal Medication				
Sunglasses	1		T	
Watch	1		T, O	
Camera	1	batteries/memory card	T, BB, S	
Whistle	1		T	
Daypack for side hikes	1		S, O	
Fishing Equip & Licenses	1	some itineraries have opportunity to fish	S, O	
Crazy Creek seat	1		T, O	
Postcards	1+	pre-stamped	T, O	
Food Powder	1		T, BB, S	
Notepad & Pen	1		T, BB, O	

CODE

- (T) Available at Philmont's Tooth of Time Traders
- (A) Easily accessible in pack or carried on person
- (BB) Packed together in plastic bag - placed in bear bag at night
- (S) Share with buddy
- (O) Optional

ITEMS PROHIBITED

- Deodorant
- Radios
- MP3 Players
- Video Game Devices
- Hammocks

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EQUIPMENT PROVIDED BY CREW

Necessary Items for Each Crew (7-12 Persons) to bring or purchase on arrival

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Sewing Kit	1		T	
Tent Stakes		5 per person	T	
Water Container 2.5 gal	2-3	collapsible	T	
Backpacking Stove	2-3		T	
Fuel Bottle/ 1 QT	2		T	
Fuel Funnel	1		T	
First Aid Kit	1	see Pg 42	T, BB	
Duct Tape	1	for trail repair	T, BB	
Spices		for cooking	T, BB, O	
Waterproof Ground Cloth	1/tent	6' x 8'	T	
Nylon Cord	3	50 ft x 1/8"	T	
Sunscreen	2-3	6 oz tubes w/SPF 25 or higher	T, BB	
Insect Repellent	2	small bottles, no aerosol spray cans	T, BB	
Water Purifiers/Filters	2-3	optional	T	
Multi-Tool	1		T	
Trowel/Shovel	1		T	
Carabiner	1	Carabiner must be rated climbing strength for rigging "oops" bag w/bear bags	T	

SPECIAL NOTES BY TROOP 116 EXPEDITION LEADER

Most of the following 9 items are listed in the crew equipment section of the Philmont Guidebook, but your Expedition Leader requests they be included in each camper's personal equipment.

EQUIPMENT	QTY	COMMENTS	CODE	CHECK
Toilet Paper	1	In Ziploc bag		
Sewing Kit	1	With heavy thread & needle	T, S	
Small metal tent stakes		as required by tent + 3	T	
Personal First Aid Kit		In ditty bag to include band aids, large bandages, sports tape, antibiotic ointment, moleskin, bandana, ace bandage, small supply of duct tape, personal medications.		
Waterproof Ground Cloth	1/tent	6' x 8', sized to fit tent	T	
Nylon Cord	1	50 ft x 1/8"	T, S	
Insect Repellent	2	small, non-aerosol	T, S, BB	
Sunscreen	2-3	small, SPF 25 or greater	T, S, BB	
Water Purification Tablets		Micropur, 1 tablet treats 1 liter		

EQUIPMENT ISSUED BY PHILMONT

Each Crew of 7-12 Persons is Issued the following equipment free of charge (except for damage or replacement charges upon return)

EQUIPMENT	QTY	COMMENTS	CHECK
Nylon Dining Fly	1	12' x 12' , wt 4 lbs	
Collapsible Poles	2	for dining fly, wt 1.45 lb	
Philmont Tent w/poles	1 per 2 camper	weight w/poles old tent: 7 lbs, 2 oz new tent: 5 lbs, 13 oz	
Cooking Pot	1	8 qt w/lid, 2 lbs	
Dishwashing-2nd cooking pot	1	8 qt , 1lb,4oz, or 6 qt , 1lb,9oz, or 4 qt , 10oz. Size dependent on crew size	
Beverage Pot	1	2 qt w/lid, 8 oz - optional	
Chef Cutlery Kit	1	1 lg spoon, 1 lg spatula 4 oz	
Hot Pot Tongs	1 pr	4 oz	
Plastic Trash Bags	10		
Salt Pepper			
Dishwashing Soap, Hand Sanitizer, Scrub Pads			
Water Purifier Tablets, Micropur-1 tablet treats 1 liter			
Nylon Rope 100 x 1/4"	2	Weight 2 1/2 lbs	
Bear Bags	3-6	for hanging smellables 2lbs, 4oz	
Plastic Strainer & Rubber Scraper	1 ea	4 oz	
Toilet Paper		Resupplied	

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ITEMS PROHIBITED

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Philmont Personal Equipment Advice & Recommendations

For most first time Philmont hikers, it is not unusual to spend \$300 to \$600 in equipment. The most often purchased items are boots, sleeping bags, packs, and rain gear. This list of recommendations follows the same general sequence as the Personal Equipment Checklist in the Philmont Guidebook.

Scout Uniform Your full and complete Official Scout Uniform ("Class A") for the Boy Scout crews, and Venturer uniform for Venturing crews, is required for travel and several activities at Philmont Camping HQ.

Light Weight Always keep weight in mind for every item. Always. Smaller, lighter is best.

Mark Everything Put your name and Expedition Number (622-D) on everything, including, and especially, your eating bowl, cup, spoon, and water bottles.

Backpack Unless you come from a very unusual Scout troop, this will probably be the first time that you have ever carried personal and crew gear, food for several days, and several quarts of water in a pack at one time. Packs that made it for years on troop campouts simply don't have enough volume to handle what you and your crew will be carrying on the trail at Philmont. Many Philmont hikers get a new pack before their trek. It is difficult to recommend a type of pack to bring to Philmont. Pack selection really boils down to individual choice and the amount that you are willing to pay for the pack.

- **External frame packs** have become the less common pack choice. An external frame pack for a Philmont trek should be a **minimum** of 69 L, 4200 cu in.
- **Internal frame packs** are more popular. They are bags that are built around a hi-tech suspension system. They fit closer to your back and almost become a part of you while on the trail and consequently are far more comfortable and easier to carry than an external frame pack. Since sleeping bags are carried inside of an internal frame pack, minimum size for a Philmont trek should be **no less than** 79 L, 4800 cu in. 5000 to 5200 (82-85 liters) is better. Most experienced backpackers prefer an internal frame pack. Cost can be \$200-\$400 or more.

Whether external or internal frame, make sure that the pack is large enough to carry all your personal gear plus your share of crew gear. When packed with all your personal gear, it should not be much over 1/2 to 2/3 full and should weigh not much over 30 to 35 lbs. You will need space to carry your share of provisions (up to 4 days worth of food), and crew gear (stoves, pots, fuel, dining fly, bear bag hanging ropes, and more).

There are additional things that you must do to ensure that your pack is ready to go. First, check to see that the pack is fitted properly. The hip belt must fit snugly around the waist to allow the full weight of the pack to be carried on the hips while at the same time providing enough padding to protect the hips. The shoulder straps should be padded and fit the width of the shoulders. When viewed from the side, shoulder straps should be level (or a little upward) from the shoulders to the pack frame. Second, check the condition of the pack. Most have probably never rinsed the salt and sweat from their pack's suspension system. Dry rot of pack's stitching and fabric may already have started. Check the stitching at all stress points in the pack material. Check the grommets on the shoulder straps and hip belt to ensure that they have not pulled out of the pack material. Check the pack frame welds to ensure that they are not cracked.

If absolutely necessary, you can rent either an external or internal frame pack at Philmont for a \$18.

Backpack Attachment Straps (for external frame pack) Get straps to attach sleeping bag, tent, sleeping pad, etc. Don't use bungee cords or rope to tie. Straps should be 24-36" long and have nice easily cinchable buckles.

Daypack Good if backpack has detachable lid or other piece that can be worn independently as a small day pack for side hikes to carry rain gear and water.

Pack Cover A pack cover that is designed to fit your pack is important. Trash bags are a bad substitute. Remember that the cover must go over not only the pack, but anything attached to it (sleeping bag, tent, etc.). Get a large 75-95 liter size.

Tent Philmont provides a 2-man tent for checkout at base camp. Newer ones are a Cascade Designs MSR Thunder Ridge that weighs 5 lbs 4 oz, has a 4'6" x 7'4" footprint and requires 8 stakes (freestanding). Older ones are the Philmont Backpacker that weighs 5 1/2 lbs, has a 5'6" x 7'6" footprint, 3 short poles, and requires 14 stakes (not freestanding). If you have your own tent that you want to take, please discuss it with your Expedition Leader. He will want to see it and discuss with you its appropriateness, size, weight, previous usage, etc.

Tent Stakes Each crew member will need whatever tent stakes you and your tent partner need for your tent, plus 3 more (per person). Use 6" to 7" length (not bigger), metal (not plastic). Must be sturdy. Ground is hard. Consider one with a round top to reduce risk of foot injury if stepped on. You need tent stakes for use with your own tent and you must provide up to 3 additional ones to share for crew dining fly and for other needs. For example, if you use an older Philmont tent, the number you need is 10 (1/2 of 14 plus 3).

Sleeping Bag Need good mummy type sleeping bag in 15-25 deg F temp range. It should weigh less than four pounds. At Philmont's higher elevations, the temperature can get into the thirties at night. Other than boots, the sleeping bag is the most important piece of equipment a crewmember will bring to Philmont. Crewmembers need to know that the one and only place where they will always be warm and dry is in their sleeping bags, inside their tents. Synthetic fill is often preferred over down. Down sleeping bags lose their insulating capability when they get wet and require extra caution and care to avoid this situation. Even though most sleeping bags come with a "water-proof" stuff sack, an additional plastic trash bag or waterproof bag should be placed in the stuff sack to provide a second layer of protection.

Compression Stuff Sack for Sleeping Bag A "compression" stuff sack is great, but a regular, tight-fitting one is okay. Best is one made of the newest hi-tech ultra-light fabric. If you have a down sleeping bag, you might consider a dry-sack compression sack. They have additional design features that allow air to be pushed out, but prevent water from entering. The stuff sack that typically comes with the sleeping bag is probably not a compression sack. The compression sack has straps that allow you to cinch down the bag after it is stuffed and make the whole thing smaller to go in the backpack.

Sleeping Pad An inexpensive closed cell pad is a must for all crewmembers. Not only does it provide a comfortable sleep even on those not-so-level places; it also prevents heat loss downward and provides a barrier against moisture should your tent leak in a heavy rain.

Hiking Boots (See NOLS Fitting Instructions on separate page.) Some outfitting stores may recommend leather hiking boots for Philmont because of the support they provide when compared to hi-tech synthetic boots. However, leather boots cost more and are harder to break in. Spending \$200 or more on leather boots just does not make sense when a synthetic pair of boots costing less will work just as well. Outfitting stores may say that synthetic boots will fall apart due to the ruggedness of Philmont's trails. Not so. In any case, if new boots are needed, plan on purchasing them in March. This will provide enough time to break in the boots while reducing the possibility of them being outgrown by Philmont. Whatever you buy, make sure that they have been waterproofed several times before you head to Philmont. Some hikers have replaced their boot's insole with a more expensive gel type insole. If you choose to do this, be sure to try out the new insoles during your shakedown hikes. Sometimes a new insole raises the heel out of the boot's heel cup and causes a blister or may reduce the overall boot size. Remember, boots that fit too snug is one of the biggest mistakes.

Lightweight In-Camp Shoes Hikers also need to pack an in-camp shoe that can be worn once you get into camp and can get your boots off. A set of moccasins or running shoes makes an excellent in-camp shoe. Most Scout use sneakers they already own. Texas and other sandals are not permitted for many Philmont activities. Philmont requires the wear of a closed toe shoe or boot when cooking, branding, rock climbing, horseback riding, spar pole climbing and your conservation project, so leave your Texas and Crocs at home. Getting into in-camp shoes gives your feet a rest and gives you an opportunity to sun dry your boots. Whatever type of in-camp shoe you choose should have a low impact sole that keeps it from further damaging the ground of your already over camped camp site. In-camp shoes should be easy to get on and off for those late night visits to the latrine. And finally, they should be comfortable and sturdy enough for you to hike in to the next campsite, if you are having severe boot problems.

Socks Always, ALWAYS, hike in good socks WITH sock liners! Good socks make more difference in comfort for less difference in price than any other piece of backpacking gear. They protect your feet from your boots and vice versa. They should hug your feet while slipping smoothly across the lining of the boot reducing friction. Liner socks reduce it still more by providing yet another interface. The preferred inner layer is a synthetic (polypropylene or CoolMax) sock liner. The liner wicks the moisture away from the foot to the outer sock. When the foot is dry, there is a decreased chance of a getting a blister. Heavy wool socks as outer layers are great. However, some do not like the feel of wool socks and they take a long time to dry out once they get wet. SmartWool or other Merino wool socks contain wool, but are very soft and dry much quicker than the all-wool ragg socks. For the liners, SmartWool, CoolMax, polypro are all good. NOLS reports that their students have good luck with a medium weight liner under a thick wool or polyester sock, but many youth use light weight liners. Don't go with silk-weight. Get something at least reasonably substantial. Like most backpacking equipment, much of it really comes down to a matter of personal choice. Whatever type you use, pack **three pairs** of outer socks and **three pairs** of sock liners. It is important to think of your socks and boots as parts of a **system** to get you over the ground. You should wear your chosen socks when trying on boots. Also, don't overlook the fact that you can use your socks to micro-adjust the fit. If you have feet of different sizes or volumes, consider combining socks with different thicknesses to help accommodate the difference. Make sure that you check the condition of your socks before you head for Philmont. Too often, crewmembers will buy new boots and neglect to buy new socks. Socks do wear out! If the socks' padding capability is worn down, get new ones. Be sure boots fit nicely over your heavy sock combination. Boots too snug is one of the biggest mistakes.

Stuff Bags and Ditty Bags These are a really good to have, in different colors, especially if using an internal frame pack. They are great for keeping things, both large and small, organized inside your pack. They can provide reasonable (but not perfect) waterproof protection. They are more durable than simply using Ziploc bags, though using them in combination with Ziplocs can provide perfect waterproof protection. Most experienced campers suggest taking along several spare gallon, quart, and pint size Ziplocs. (Use freezer Ziplocs - they are more durable.)

Sea to Summit and OR (Outdoor Research) make very good stuff sacks and ditty bags with hi-tech ultra-light and strong siliconised nylon or gossamer fabrics. REI, Jesse Brown, and Great Outdoor Provision Co carry these and/or other similar brands. A size of 15" tall by 7" diameter is good. They can be used to put socks in one, t-shirts & shorts in another, fleece shirt and long pants in another, rain gear in another, etc. Use different colors so you can tell apart w/o opening. You can also put some things in a gallon Ziploc before putting in the stuff bag for the most protection, but this is not always necessary except maybe for socks and special items that MUST be kept completely dry.

Smaller ditty bags, 8" tall by 3" diam, are good to collect small loose things like your whistle, tooth brush, tooth paste, sewing kit, safety pins, flashlight, comb, medicine, personal first aid items like band aids, antibiotic ointment, moleskin, etc. If anything must really be waterproof, like medicine or band aids, etc, put these items in pint Ziplocs before putting in the ditty bag. Very small waterproof plastic bottles (made by Nalgene) for medicine and pills, like Tylenol, Aleve, Benadryl, and Imodium are good.

It's good to have some cheaper, lighter weight, off brand, stuff bags for a couple of other things - (1) to hold your in-camp shoes (keeps possibly dirty soles from touching other things in pack), (2) to hold your bowl, cup, and spoon which are inside a Ziploc, and (3) a larger and empty stuff sack to throw in all your "smellables" that must be collected each evening to go into a bear bag - try to have an odd color, like purple or orange or yellow, so you can ID yours quickly in the morning when it gets dumped out on the ground with all the others.

A Word About Cotton Cotton garments have no place on Philmont's trails. Although cotton is an inexpensive, lightweight and breathable fabric, it is also very absorbent and slow to dry. When wet, cotton loses its insulating capabilities, and it absorbs a significant amount of moisture and holds it next to the body. This adds weight to the garment and causes cooling through evaporation. At Philmont, rain is typically accompanied by a rapid drop in temperature where wet cotton garments create a hypothermia risk.

T-Shirts CoolMax and other 100% polyester hi-tech performance fabrics are great. Wicks moisture from skin, dries in no time when wet. Philmont Trading Post (Tooth of Time Traders) sells some nice logo polyester shirts for under \$20. (See www.toothoftimetraders.com or phone 575-376-1145.) CoolMax, Patagonia Capilene (or equiv) shirts are available lots of places - REI, Jesse Brown, Campmor. Don't worry about style. Will probably want to burn shirt(s) worn on the trail when it's over. And don't bring any shirt with inappropriate themes (tobacco, sex, drugs, violence, etc.)

Hiking Shorts 2 or 3 prs. Again, don't worry about style. Best is basic quick-dry and light weight, running shorts, material like supplex. Built-in underwear is okay. Many prefer Under Armour type underwear. Cotton boxers can be problems for many and chaffing can be a problem. Cotton is a bad outdoor fabric for most parts of the body.

Long Sleeve Shirt Need 1 long sleeve shirt for cool evenings - or rare insect problems in camp. A 200-weight fleece shirt is good. A cotton sweatshirt is NOT good. A fleece shirt with a Goretex rain jacket is the most you should ever need for warmth.

Long Pants Need 1 pr long pants. No cotton. No jeans. Get light weight. Must have long pants for a few specific activities, and good for warmth in evening.

Long Underwear Suggest one set (top & bot) light wt long underwear. Patagonia Capilene (or other polypro synthetic) light or medium weight is fine. May not actually ever need. It's expensive. REI and Jesse Brown carry them.

Stocking Cap Strongly suggest 1 stocking cap, wool or fleece. May not ever need.

Full Brim Hat Should have 1 full-brim hat for sun & rain protection. The "OR Seattle Sombrero" model (is Goretex) is very popular, but there are others. A main undesirable attribute is a black underside liner - probably makes it feel hotter.

Gloves 1 pr light weight gloves (or glove liners) strongly suggested, but may never need.

Rain Gear It is really difficult to give advice to crewmembers on rain gear other than it is a must and it should be good quality. You should note that the ONLY rain gear listed on Philmont's personal equipment list is a rain suit and NOT a poncho. A Gore-Tex, or water-proof and breathable equivalent, rain suit is recommended. Gore-Tex allows perspiration to escape while keeping rain out. However, a Gore-Tex rain suit typically costs \$150 to \$300 and can be heavier than coated nylon. A lightweight coated nylon rain suit works almost as well and costs under \$60. Do not purchase the less expensive, but much heavier PVC rain suit. The beauty of a rain suit is that the jacket can also be used to keep warm, when layered with a wool or fleece sweater. Philmont Rangers tell you that an inexpensive rain suit is far superior to the most expensive poncho. Before you buy any type of rain gear, make sure that it states "waterproof" and not "water resistant." Water resistant fabric may handle a light dew, but will become water logged and soak the wearer after only a few minutes of an afternoon Philmont rain. Prior to going to Philmont, you should test your rain gear. Your neighbors might get a chuckle, but wear a light colored t-shirt under your rain gear and get sprinkled with the water hose for about 10 minutes. This will provide a good test to determine whether your raingear needs to have a treatment such as Nikwax's TX-10 Direct applied. Some have been known to stand in the shower at home to check out raingear!

Eating Kit For eating, only need a bowl-type plate, a cup, and spoon (all plastic - should be sturdy). The plate should not be of such large diameter that it won't fit into the cooking pot for cleaning and dipping into boiling water for sterilization - a bowl-type plate is the best. Cup should have measuring marks on it. Best if it actually holds more than 1 cup. A great substitute for a cup is a 16-oz wide mouth BPA-free Nalgene bottle. You can mix hot chocolate in it by putting on the cap and shaking, and not have to use your spoon to stir. A plastic spoon is necessary for eating and must be strong and sturdy and unbreakable for continued use. Some people like to use a spork, but this is not necessary.

Water Containers Dehydration is the most common ailment that disrupts or prematurely ends a hiker's trek, and must be guarded against with utmost seriousness. Each crewmember must have water bottles for a minimum of 4 quarts. More Scouts are using hydration systems (Camelback, Platypus) on the trail. Although these systems offer the convenience of being able to take a drink through a tube without having to take off your pack, many advisors are not big fans of them for several reasons. When you drink from one of these systems, it is really hard to tell if a crewmember is really drinking enough. Additionally, hydration systems can build up mildew in their drinking tubes if they are not properly cleaned. Sometimes they tend to leak. Taking a water break, whether it is a short "picks on" break or a longer "picks off" break, and taking a good slug of water is often the best procedure. During the break, you can quickly assess by looking at the level in the water bottle to see how much water is being consumed. In addition, most packs have external pockets that provide easy access to a water bottle if you need a drink while you are hiking. Nalgene wide mouth quart-size water bottles are highly recommended. They come in several different colors. Many prefer three that are 1 qt size and two that are 1 pt size to give more flexibility. The wide mouth design works best for scooping water and for adding drink mix. Do not attach Nalgene water bottles to your pack by clipping onto the strap of the lid. Weight and motion while hiking will cause the strap to break in a day or two.

Pocket Knife SMALL (key chain size) pocket knife - WITH SCISSORS - important.

Flashlight Small - Small LED bulb headlamp models are great.

Compass Must have.

Bandanas Should have 2.

Towel for Trail Small hand size is plenty big enough for trail use. (Take bigger one for touring and base camp but leave behind while on trail.) A "Pack Towel" is highly recommended. They are small and hold LOTS of water - like a chamois, only soft & fuzzy.

Sunscreen Never take the whole container. Get a few small, 1 or 2 oz, water-tight screw top bottle containers for stuff like this (and medicine). Nalgene makes them.

Camera Optional.

Watch VERY IMPORTANT. One with alarm is great. One with altimeter is also very nice.

Personal First Aid Kit Each Scout must have his own. Should contain band aids, large bandages, sports tape, antibiotic ointment, moleskin, bandana, ace bandage, a small supply of duct tape, and medications. Put all in one small ditty bag.

Crazy Creek Seat Optional, but very desirable. Can be folded and easily strapped to pack.

NATIONAL OUTDOOR LEADERSHIP SCHOOL (NOLS) FITTING INSTRUCTIONS FOR HIKING BOOTS *

Your footwear is arguable the most important part of your gear, especially if you are planning to hike long days or climb difficult peaks. Poorly fitted boots will leave your feet an ugly mess of blisters. It is best to shop in the afternoon since feet tend to swell during the day. Always fit your larger foot. The key to proper fit is to determine the correct length. A boot which is too small (short) will cause more problems than one which is too large.

In fitting your boots, bring along the type of socks you plan to use in the mountains. At NOLS we have had the most luck with boots worn and fitted with a medium-weight liner sock next to your foot and a thick wool or polyester sock on the outside. The two pairs of socks pad the foot, reduce friction, and wick moisture away from your foot. Therefore, you may have to wear boots in a size or two larger than your street shoes. A good rule of thumb is to put the boots on with no socks, push your toe to where it is touching the front, and still have a finger's width of space between your heel and the back of the boot. Fit any tighter, and your feet will be squeezed and uncomfortable, not to mention cold. Fit any looser, and you will not have the "feel" for the trail that you need to cross bolder fields and slippery terrain. Spend time walking around the store and try different brands. Every brand has its own individual fit and shape because each company uses different foot models around which to design their boot. Some people have "high volume" feet and require a wider, deeper boot. You may find a size ten in one brand fits well in the length but is too tight on your instep. Try on another brand.

Before you go out on your trip, break in your boots with day hikes or even wear them to work. Try to log at least 20 miles on your new boots before you take them out on your extended trip so you can make sure they fit you well.

* *The National Outdoor Leadership School's Wilderness Guide*
The Classic Handbook, Revised and Updated 1999
by Mark Harvey
Published by Simon & Schuster
Chapter 3, pages 67-70
NOLS is "the Harvard of the wilderness schools"

Notes & Acknowledgments

Superior Outdoor Outfitting Retailers

REI, Carolina Place Mall, Northlake Mall, and on the Internet at www.rei.com.

Jesse Brown Outdoors, Sharon Corners Shopping Center (across from SouthPark) They give a 10% Scout discount with Scout ID card.

Great Outdoor Provision Company, Park Road Shopping Center. They give a 10% discount with Scout ID card for members of their Mule Team Club.

Campmor, on the Internet at www.campmor.com.

Philmont Trading Post (Tooth of Time Traders), order online at www.toothoftimetraders.com or by phone at 575-376-1145.

Physical Preparation A High Adventure backpacking trek can be physically demanding. Even if you are able to pass a physical exam with flying colors, you will need to get in shape for steep, rocky trails with 1,000-foot climbs being typical, and carrying a 35 to 50 lb. pack at elevations where there is 20 to 35 percent less oxygen. A program of regular aerobic exercise is important. Jogging, hiking uphill or long flights of stairs, and hiking with a full pack are excellent preparation. Training hikes that will prep you for boots and feet are good. Actual overnight backpacking with a loaded pack is good whenever possible. Any opportunity to use your clothing & equipment is helpful, as a lot of it may be new and you're trying it out. It's good to see in the field what you like, what works, how it works, etc.

Mental Preparation A positive mental attitude, teamwork, and maturity are of paramount importance. The physical and mental stresses of a High Adventure trek can be challenging. Maintaining a positive attitude and displaying good teamwork is a MUST, will go a long way to overcoming all of these challenges, and will allow you and everyone else to stay safe and have fun.

Acknowledgments

1. *Philmont Advisor's Guide*, by Cooper Wright, National Capital Area Council, Wally Feurtado and Mimi Hatch, Baltimore Area Council. This guide is available for \$10 using the order form at the following link on the Baltimore Area Council's Philmont Contingent Website: <http://www.bacphilmont.org/pag.html>. Coop, Wally, and Mimi are Scouters with multiple Philmont trek experience who, with input from many other experienced sources, have created this well written guide as a supplement to official Philmont publications. Questions may be directed to Mimi by email at philmontadvisorsguide@gmail.com. Some of the recommendations from this guide have been included in this document in the sections about boots & footwear, sleeping bags, backpacks, rain gear, and water containers.
2. *Philmont Guidebook to Adventure*
Some information has been taken from this pocket-sized booklet made available to all Philmont Expedition participants in March.
3. *The National Outdoor Leadership School's Wilderness Guide*
The NOLS boot fitting instructions comes from chapter 3 of this book. NOLS, headquartered in Lander, Wyoming, is the acknowledged leader in providing challenging outdoor leadership experiences from bases around the world that last from a few weeks to several months. It is "the Harvard of the wilderness schools."
4. Expedition Leader and experienced backpacker Mark McFalls
Content has been reviewed, edited, and enhanced by Mark McFalls, who has extensive backpacking experience in the eastern Appalachian mountains and other locations. He was an adult advisor on Troop-116's Philmont Expeditions in 2011 and 2013.
5. Expedition Leader Julian Love
Most of the content of this High Adventure Camping Personal Equipment Advice & Recommendations document comes from the experiences of Julian Love. He has planned and led more than ten Philmont Expeditions since 1992, including three for the Council, seven for his Scout Troop, and one for his Venturing Crew. He has planned and led many other successful Scout High Adventure trips since 1984.