

[Philmont Scout Ranch](#)

Philmont Advisor's Guide



By

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PREFACE

Going to Philmont can be the highlight of a young person's Scouting career. However, getting a crew ready to go can sometimes appear to be an overwhelming task for a first time advisor. This guide is written to supplement the information contained in Philmont's *Guidebook to Adventure* and *PEAKS Book*. Written to reflect the combined training programs of the National Capital Area Council and the Baltimore Area Council, the information contained in this guide can easily be adapted by other councils or troops to assist them in preparing for Philmont or other individual long term backpacking trips. Although the primary pronouns used in this guide are often masculine, we realize that there are many female Philmont participants. It is just easier to write "he" or "she" than "he/she".

We recognize that we present only one viewpoint on how to prepare for and how to hike and camp while at Philmont. We have tried to combine the lessons learned from our years at Philmont along with the guidance contained in several outstanding resources including the *Boy Scout Fieldbook*, the *Complete Walker III*, and the *National Outdoor Leadership School's Wilderness Guide*. Despite all of this, you should know that we still argue among ourselves over the finer details of backpacking.

We hope that you find this guide helpful and encourage you to copy it and give it to others who may be planning similar activities. Since all proceeds from the sale of the guide serve as a fund raiser for Venturing Crew 1519's high adventure activities, we ask that you send a donation of \$10.00 in a check made out to "BSA" for each copy that you make to Cooper Wright at the address shown below. We also encourage you to visit www.lns.cornell.edu/~seb/philmont for the very best Philmont web site. Some of the material contained in the guide is featured there.

We also encourage your comments on the contents of this guide. Although we would like to go to Philmont each summer, that is just not possible. Requirements and equipment needs constantly change and we are always receptive to new ideas. Our goal is to keep this guide as current as possible. If your comments are published, you will get to see your name in print along with the guide's other contributors.

We would like to thank Bob Klein, John Spencer, Doug Cox, Roy Fisher, Joe Flaig, George Kain, Troy Hayes, Cathie Cummins and Mimi Hoyt who provided their considerable insight and experience on the Philmont preparation process. We would like to thank all Philmont Rangers who serve as role models and trainers to Philmont Crews. Special thanks go to Philmont Rangers Karin Stork, Karl Cheng, and Derek Toms, and Sarah Rogers who gave us their comments. Finally, we want to especially thank Roy Swab of the National Area Council and Jerry Shipman of the Baltimore Area Council, who have made it possible for thousands of young men and women and their advisors to go and enjoy all that Philmont can be.

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BEFORE YOU GO

Physical Training

Philmont is physically demanding, especially for adults. It is absolutely amazing how many advisors go to Philmont expecting that it will be just like another summer camp. What a surprise when they have to come off the trail because they cannot handle Philmont's physical demands. This problem occurs so frequently that one of the responsibilities of your Philmont Ranger is to evaluate the physical conditioning of both you and your crew to determine whether you are able to make the entire trek. Rangers we talked to say that, based on their experience, *80% of the adult advisors coming to Philmont are not adequately prepared* for the physical demands of the backcountry and that *50%* of the adult advisors had not exercised at all prior to their arrival at Philmont.

We believe a three-part physical training program is required to fully prepare for Philmont. The first part is an aerobic program to build up your cardiovascular system. The second part is a strength program to tone those muscle groups that will be used most often. The third part is a series of pre-trek hikes to get your feet used to hiking with boots. However, before starting your exercise program, get a copy of the Philmont medical form and get your physical examination. At that time, review your exercise plan with your doctor.

The first rule in any physical training program is to start slowly and build up your exercise routine. This

is hard to do because we remember what we were capable of doing when we were younger and in much better shape. The second rule is to immediately stop exercising if you experience any pain. Philmont suggests that you begin an exercise program at least six months before arrival. We agree, but recommend that you increase your level of training intensity during the last three months. During the last month before you leave for Philmont, you should try to exercise every day. If your body is only used to exercising every other day, it will begin to anticipate a day to recover. At Philmont, every day is another day on the trail. While it may be easy to hike that first tough day at Philmont, on the very next day, the body seems let down, thinking that it is supposed to get a day off! Usually by day six, you have worked through the soreness and are used to the physical exercise, but the first five days can be rather difficult.

The objective of the aerobic exercise program is to reduce the time required for your heart to recover from heavy exercise. At Philmont, you need to be able to monitor how well your body is performing. While hiking along some of Philmont's steep mountain trails at high altitude, your pulse may exceed your estimated maximum heart rate ($220 - \text{your age}$). Surpassing this rate can be dangerous since you may be working harder than your heart can handle. Learn how to take your pulse. Place two fingers on the carotid artery in the groove on either side of the Adam's apple. Count for 6 seconds and multiply the result by 10 giving your heart rate per minute. Should you find that your pulse is too high, stop for a minute, rest, and take your pulse again. It should be around 120-130 or so. After two minutes, your pulse should return to approximately 100. Try to stay at a level of exertion that will keep your heart below its estimated maximum rate. Aerobic exercise conditions your body so that you can safely exercise at higher heart rates while at the same time decreasing the amount of time your heart needs to recover. The more efficient the recovery time, the more you will enjoy Philmont.

There are lots of aerobic training programs that you can choose from such as running, biking, or swimming. You should plan to aerobically exercise at least three times a week. Any less and you are actually hurting your body. It is also important that you try to exercise for a minimum of twenty to thirty minutes, at your training heart rate. Depending on your physical condition, the American Heart Association and the President's Council on Physical Fitness and Sports recommend that you train within a zone that ranges between 70 and 85% of your estimated maximum heart rate. For example, a 40 year old adult advisor should have an estimated maximum heart rate of $220 - 40 = 180$. If this advisor has just begun his physical training program, his training heart rate should be $126 (180 \times .70)$. If he is in excellent physical condition, he should exercise at a training heart rate of $180 \times .85 = 153$. It is interesting to note that the training heart rate for your average, long legged 16 year old crew member ranges from 143 to 173! No wonder why it usually is an adult who is getting a cardiovascular workout while on the trail.

You should note that your estimated maximum heart rate and training zone values are only predicted averages that may differ 10 to 15 percent higher or lower depending on your actual fitness level, maximum heart rate and resting heart rate. Your training zone and maximum heart rate should be items of discussion when you visit your doctor prior to beginning your physical training program. And if you are planning on taking a more strenuous trek, we believe that you should be working out consistently at the higher end of the training zone. Don't be fooled by Philmont's *Guidebook to Adventure* that says to train at the 75% level. We think you will need that extra 10% when you start climbing some of the hills in the backcountry.

The objective of the strength exercise program is to build or tone muscles so that you will not be sore at Philmont. Leg muscles need to be strong for climbing hills. Muscles around your knees need to be strong for going down hills. Shoulders and chest need to be toned because the backpack straps rest

along those muscle groups. Consider a weight program doing squats, military presses, and calf raises.

The objective of the hiking program is get your feet used to hiking long distances in boots. One of the questions recently asked on the TV game show, Family Feud, was "what was the most number of miles you have walked in one day?" The number one response was just two miles! A common ailment of advisors is "Hiker's Ache". The constant pounding that your feet take at Philmont, as a result of back to back daily hikes of over 10 miles, can add up and create significant soreness throughout the body the next day. This is especially true for those advisors who selected some form of cardiovascular exercise other than running for their Philmont physical training program. In 1996, Wally was sore all over after his first shakedown hike. Three weeks later, after his second shakedown hike, Wally was sore again. He was able to eliminate some of this soreness by taking a series of weekly 10-mile hikes during the final four to six weeks prior to departure. Just like your physical training program, you should also build up your hiking endurance. Spend time in your boots and hiking socks. Cut the lawn in your boots. Walk around the block each night in your boots. Find out where your feet hurt and where you can expect blisters.

When Coop goes to Philmont, he always takes along a supply of Vitamin I (better known as ibuprofen). Taking ibuprofen with breakfast in the morning before each hike and an additional amount with supper at the end of the day helps eliminate some of the soreness. The idea is to get the ibuprofen in your system before you hit the trail each day. Stretching exercises done for five to ten minutes at the end of the day and again in the morning before you go out can also help lessen the soreness and get the body ready to go again. They can also help prevent or reduce injuries to muscles not properly warmed up.

Wally's program consists of daily stationary bike riding, push-ups, sit-ups and leg lifts. Every other day, he adds weight work for strength. However, he really exercises 3 to 4 days a week. If he has to miss a day, he will resume with the aerobic portion of the program and defer the strength until the next day. If he has to miss more than two days, he does the sit-ups, pushups, and leg lifts. Wally favors stationary bicycling for an aerobic exercise program because it is a low impact activity and does not stress his knee and ankle joints. It also builds his leg strength, which is what is needed at Philmont. Local garage sales have low mileage bikes for very reasonable prices. Some people hate to use the bike because is it boring. Wally found a way to keep his motivation up while riding. He wrote the word "Philmont" on a large piece of paper and taped it to the front of his bike. As he exercises while watching TV, he glances down at the "Philmont" sign to remind him of why he is doing it.

Coop's aerobic training program consists of runs, four to five miles in length, three to four days a week. He tries to vary his runs, adding hills or changing his pace and distance so that it makes them more enjoyable. On the days when Coop does not run, he does weight work for strength, concentrating on exercises to strengthen his back, chest and legs. A month before leaving for Philmont, Coop changes his program to focus on hike preparation. He loads his pack with 40 pounds of phone books and walks for an hour each day in his hiking boots. This helps get his back muscles and feet used to the amount of weight that he will be carrying on the trail.

If you are a smoker, getting ready for Philmont provides a great opportunity to make the move to quit. During the dry summer of 1996, the entire backcountry of Philmont was declared a no smoking area and smokers had to go cold turkey for ten days on the trail. However, if you are still smoking by the time you arrive at Philmont, the odds are that you will soon have a revelation of biblical proportions. Climbing Mount Phillips or Baldy Mountain can be a significant emotional experience for a smoker. For most, the climb is a rugged challenge, culminated with the reward of panoramic vistas and untold beauty. The heavy smoker however, will spend the majority of the time just trying to catch his breath.

At Appendix A, we have included a copy of Philmont's suggested six-month physical preparation program. The physical training portion of this program pretty much follows the guidelines that we have outlined above and it makes a good handout when you first meet with your crew. A final word on physical training. From a practical standpoint, it is probably impossible to overtrain for Philmont, provided that you do not injure yourself in the process. Adults will, in most cases, need more physical preparation than Scouts will. If you keep finding reasons for not exercising on a regular basis, do yourself and your crew a favor; **DON'T GO** to Philmont. You will become your crew's weakest link and could ruin the Philmont experience for the rest of the crew.

Diet and Weight

In 1992, Philmont had to medivac an extremely overweight advisor out by helicopter from Shaefers Pass because the search and rescue team simply could not carry him out on a litter. A similar incident took place in 1995, requiring extreme rescue measures to bring in another overweight advisor. In 1996 and 1998, we arrived at Philmont the day that an advisor tragically collapsed and died while on the trail. As a result of incidents like these, Philmont's medical staff has intensified its already very thorough screening process for overweight advisors and Scouts. In 1997, those advisors and crew members that appeared to be overweight were weighed in as part of the medical check process at the Health Lodge. In 1999, Troy Hayes knew an advisor that had completed all of his shakedown hikes, but came to Philmont over the maximum acceptance weight (shown below) and was not allowed on the trail. Philmont supplied a Ranger to take his place. If you know that an advisor or one of your crew members does not meet the weight guidelines, have him put a plan in place to lose the extra weight. He should consult his doctor prior to beginning any diet. If he exercises each day, he will begin to lose weight, even if he does not change his diet. The reason is simple. Excess calories are burned up. The weight loss may only be one or two pounds per month, but weight loss will occur.

The trouble with dieting and being on a regular exercise program at the same time is that the exercise program requires energy and some diets restrict foods that are high in complex carbohydrates. Low fat diets with high intake of complex carbohydrates such as potatoes, brown rice, whole grain bread, cereal such as Grape Nuts, Total, and Bran Flakes, really provide enough energy with a significant weight loss. By keeping the **TOTAL** daily fat grams to fewer than twenty, actual calorie counting is probably not needed. Buy a calorie counting book that also lists the grams of fat. Anything that has over 2 grams of fat, eliminate from your diet. What are left are whole grains, fruits, vegetables, and skim milk dairy products. Adding chicken, fish and turkey will provide additional protein to your diet. In a week, your cholesterol level will be reduced and you should be feeling better. However, doing without margarine, butter, and salad dressing is really tough.

If a low fat diet was part of your physical training program, you may want to slowly increase your daily fat intake just prior to leaving for Philmont. Wally had a problem one year trying to adapt to the typically high fat meals served while traveling to and on the trails at Philmont. You don't need to be battling your stomach while hiking at 10,000 feet elevation.

Philmont uses the revised Dietary Guidelines for Americans from the U.S. Department of Agriculture and the Department of Health and Human Services (shown below) as their weight guidelines for crew members and adult advisors. Those who exceed the recommended limit have been determined by Philmont's medical staff to be an extreme risk for health problems and will most likely not be allowed to hike in the backcountry.

PHILMONT WEIGHT LIMITS FOR BACKPACKING (lbs.)

HEIGHT RECOMMENDED WEIGHT MAXIMUM ACCEPTANCE

5' 0" 97 - 138 166

5' 1" 101 - 143 172

5' 2" 104 - 148 178

5' 3" 107 - 152 183

5' 4" 111 - 157 189

5' 5" 114 - 162 195

5' 6" 118 - 167 201

5' 7" 121 - 172 207

5' 8" 125 - 178 214

5' 9" 129 - 183 220

5' 10" 132 - 188 226

5' 11" 136 - 194 233

6' 0" 140 - 199 239

6' 1" 144 - 209 246

6' 2" 148 - 210 252

6' 3" 152 - 216 260

6' 4" 156 - 222 267

6' 5" 160 - 228 274

6' 6" 164 - 234 281

6' 7" & over 170 - 240 295

We believe that the maximum acceptance weight is very generous, but we encourage advisors and crew members to aim for a weight within the recommended zone.

Selecting Your Trek

We recognize the important role that program features play in your crew's trek selection process. However, we also understand that the maturity of your crew is another factor that must be considered in trek selection. You do not want to "overtrek" by doing more miles than your crew can physically or emotionally handle, thereby missing planned program opportunities. On the other hand, you do not want to "undertrek" and wind up spending lots of time in camp when you could have had a chance to see more of Philmont.

Before discussing possible trek selections with your crew, assess their abilities and maturity level. It is tough for a fourteen year old Scout to perform his camp chores when he is tired after a long hike or immediately after he wakes up. It can take a young crew three to four hours from the time they wake up until they take their first step on the trail. Some crew members may suggest that if they wake up really early (4 am), they can leave camp by 8 am. This doesn't work because the more time a crew gets, the more time they will take. Advisors can take charge and kick butt and get the crew out of camp within an hour. But this does not allow the crew leader to perform his function and it just raises the advisor's blood pressure. With fourteen to fifteen year old Scouts, you should select a trek that requires only 5 to 8 miles of hiking per day (50-60 total miles). With fifteen to sixteen year old Scouts, longer treks can be selected. By reminding the crew that if they take only two hours to get out of camp, they will be able to hike an additional 1 to 2 miles a day, enabling the crew to hike 6 to 9 miles per day (60-70 total miles). However, with sixteen to seventeen year old Scouts, maturity is expected and strenuous and super strenuous (80-110 total miles) treks are more than doable.

One final point about physical and emotional maturity. Both Wally and Coop have seen instances where the behavior of one Scout ruined the entire Philmont experience for the rest of the crew simply because he was either not physically or emotionally ready to handle the trek. As an advisor, you may be faced with a similar situation early in your crew development process. Since it is your responsibility to ensure that the entire crew is completely prepared for Philmont, you may have to step in and talk with the Scout in question along his parents. In a case like this, we recommend that the Scout wait another year or two before attending Philmont, so that his experience and that of the crew will be the best that it can be. Since you will have only one opportunity to do a trek at Philmont (unless you come back for Trail Crew or Rayado), why not make it something really special that you will remember for the rest of your life?

A second factor that should be considered in selecting a trek is scenery. Some areas of Philmont are simply spectacular. We have listed below some of our favorite places to hike:

- a. Fish Camp to Abreu - The trail follows along the south side of the Rayado River canyon where the hiker has continual views of the river and the mountains to the north. Be sure and use the caterpillar method (see On The Trail) so that all crew members will have a chance to view the canyon.
- b. Ponil, Sioux, and Bent to Pueblano over Wilson Mesa. Several years ago, Wilson Mesa was devastated by a forest fire which destroyed its trees but provided for some exceptional views north into Colorado and west towards Baldy Mountain.
- c. Abreu to Crater Lake via Stonewall Pass - This hike has some special views of the Tooth of Time just outside of Bear Caves camp.
- d. Miners Park to Shaefers Pass - This trail offers a close up view of the "Grizzly" Tooth.
- e. Shaefers Pass to the Tooth of Time - The view from Shaefers Peak is outstanding. The path along

Tooth Ridge is exceptional, with huge rock outcroppings and great views. Be sure to look to the north and pick out Baldy Mountain. Once past the Tooth, the trail becomes a hot, dusty walk into Base Camp that never seems to end – be sure to have plenty of water.

f. Hidden Valley, Window Rock and Cathedral Rock - Although the north and south trail heads to this trail are somewhat hard to find, it provides exceptional views of the Tooth of Time and base camp. Hidden Valley is a special place, soft and quiet.

g. Cimarroncito to Sawmill - This path goes through Grouse Canyon and Sawmill Canyon. The views along the canyon walls are outstanding.

h. Sawmill to Thunder Ridge - About a quarter of a mile north of the radio tower, there is an unmarked side trail that leads 100 meters to some spectacular views of Baldy Mountain, Wheeler Peak (New Mexico's highest mountain), Eagle Nest Lake and Colorado. As you reach treeline at Thunder Ridge, look again to the west for some more great views.

i. Thunder Ridge to Comanche Peak - There are several overlooks that offer views of Baldy Mountain and Wheeler Peak to the west.

j. Visto Grande to Harlan - This hike takes your crew through two beautiful meadows.

k. Harlan to Cimarroncito - Words cannot describe this trail with views of Cathedral Rock, Window Rock and the back side of the Tooth of Time.

l. Dan Beard to Bent via Bonita Canyon - The crew should use the caterpillar (more in the On The Trail section) technique to provide an opportunity to see the view of the canyon.

m. Indian Writings to Dan Beard - Along the trail, there are several outstanding rock formations. The views north to Little Castilla Mountain are unique.

n. Ponil to Indian Writings - The views from Hart Peak are great, but the view from the top of the canyon leading to Indian Writings is exceptional.

o. The High Peaks - Baldy Mountain or Mount Phillips are tough, but the struggle up is well worth the view. The loop from Baldy Town over Baldy Mountain and through Copper Park is particularly impressive.

p. The new trail from Baldy Skyline to Head of Dean provides some exceptional views west to Baldy and Touch Me Not Mountain.

A third factor to consider is whether your crew wants to hike over Baldy Mountain or not. Although we feel that the northern part of the ranch is not as scenic as the southern part, Baldy is a big attraction for many crews. It seems like no matter where you hike, Baldy is always in the skyline, offering a constant challenge to those who would hike up its steep slopes. By seeing Baldy at every turn, those crews that are not scheduled to hike over it are constantly reminded of what they missed. Approximately half of Philmont's treks provide an opportunity for crews to hike over Baldy. There are only five treks (13, 15, 21, 26, and 28 in 1999) that include both Baldy Mountain and the Tooth of Time. These treks appear to be the most popular and therefore are the most difficult get as your first choice. If you do receive one of these five, you will most likely be hiking with a sister crew. There are also treks that begin in the

southern part of the ranch, include a side hike over Baldy Mountain, and finish in the northern part. These treks are great because Baldy Mountain gets bigger and bigger and the anticipation grows as the crew gets closer. However, these treks are usually the most strenuous. Please do not assume that we are promoting the treks that hike over Baldy. On the contrary, hiking in the scenic southern portion with its views from Mount Phillips or Comanche Peak of Baldy and Touch Me Not Mountain is simply spectacular.

When you receive the *PEAKS Book* in March, there is one final factor that you may want to consider. Hiking into base camp over the Tooth of Time can be pretty special. Nineteen of the thirty the treks come in over Tooth Ridge and the scenery is simply spectacular. You can't beat the feeling of pride and accomplishment that will be your crew's as they walk the final few miles back into civilization. However, the trail from the Tooth has recently been re-done and has become a long, hot, dry walk into Base Camp that seems to never end.

It would be great if your crew members could decide on their trek by themselves. However, with thirty to choose from, this can be a very time consuming process. One method that has worked for both of us is to preselect five treks that are within the physical and emotional abilities of the entire crew, including the advisors. These treks are then presented during a crew meeting and the entire crew has a chance to decide what program activities they want to do.

Crew Training

The single most important goal for the Philmont advisor is helping the crew pull together as a team. This is especially true for crews made up of Scouts from different troops that have never hiked and camped together before. Advisors need to know the physical and emotional capabilities of each crew member **BEFORE** they head for Philmont. The way we have found that works best is to have a super active program leading up to your departure to encourage cooperative interaction. An initial meeting with the crew and their parents should take place as early as October or November. The purpose of this meeting is to review the Philmont Pre-trek Training video, discuss equipment needs, go over medical requirements, and discuss emotional problems and learning disabilities. Ask crew members to bring their sleeping bag, backpack, and rain gear for your evaluation. You may also want to look at hiking boots. But it is still probably still too early to buy new ones, especially if a crew member's feet are still growing. If new equipment is needed, talk with their parents about the possibility of getting items for Christmas. New boots should not be purchased until March to provide enough time to break them in while ensuring that they will not be outgrown before you leave for Philmont! Also at this meeting, bring a compass and a map and ask the crew to orient the map. Chances are that the crew will not be able to do this correctly. Other topics that should be discussed include the importance of hiking together, physical training, and mandatory attendance at the training sessions.

Tell the crew about the importance of being physically able to hike at Philmont. A real concern is hypothermia. When it rains at Philmont, the temperature can suddenly drop to 50 degrees or less. If a wind kicks up at the same time, all the ingredients are present for a crew member to become hypothermic. If the crew can maintain a reasonable pace, it will keep their body heat up. A slower hiker can pose a real medical threat to the rest of the crew. In addition, by day four on the trail, the slower hiker will probably be isolated by the rest of the crew who are by now frustrated from slowing down to meet his pace. In Wally's 1993 crew, one slower hiker was threatened with physical violence by other crew members because he could not keep up the pace. As a result of his slow pace, the crew habitually got into camp late and missed scheduled program activities. If a hiker can not maintain a reasonable pace and jeopardizes the remainder of the crew, you should ask him to find a slower crew or

seek a refund and try again the following year. In 1998, Coop had to deal with an adult in his crew who, for whatever reason, elected not to get into shape. His lack of physical conditioning was readily apparent during the each of the crew's early shakedown. Although he was a dedicated Scouter who had been on many troop campouts, he simply was not physically ready and would have had to come off of the trail if he had gone to Philmont.

Finally, remind the crew that training is mandatory. We recognize that there are many demands on a teenager's life, but it is absolutely essential that the crew spends time together, learning the skills they will need while on the trail at Philmont. Remind the crew that the purpose of these training sessions is not just to get in shape or learn how to hike, anymore than ball practice is to learn to throw and catch. The purpose of the training is to learn how to work together as a team rather than a group of individuals hiking together. A training schedule we both have used for crews that have never hiked together before is shown below.

March - Classroom training on the basics of personal and crew gear with an inspection of each crew member's fully packed backpack.

April - A one day training session with all personal and crew gear. Pick of location where the crew can hike in one to four miles and completely set up a Philmont style camp. Before hitting the trail, do a complete shakedown of all personal gear. While on the trail, practice terrain awareness and the "caterpillar" technique of climbing (see On The Trail section). After setting up camp, cook a complete meal, wash dishes, put up bear bags, and purify water. Once the meal is finished, the crew breaks down camp and hikes out. Note: It is possible to order food packages from Philmont that contain the same meals that are used on the trail. This allows the crew to gain some experience with the Philmont menu and cooking procedures.

This type of session maximizes training without requiring the commitment of a complete weekend. It also provides an opportunity to evaluate map and compass skills as well as determining which crew members are not in shape. Finally, it stresses all the skills that will be needed for the May overnight.

Mid May - 15 mile, 2 night shakedown hike with all personal and crew gear. The advisor should make a final determination of those crew members (including adults) who are not physically ready for the trail. Holding the shakedown in May provides two months of additional physical conditioning before leaving for Philmont.

Four weeks prior to departure - A second 15 mile, 2 night shakedown hike with all personal and crew gear. This will be your final opportunity to refine crew operations and practice low impact camping skills, as well as checking out personal and crew equipment. It should also give you a chance to find out which crew members haven't been hiking enough in their boots. Those who have spent time in their boots won't get blisters. If a crew member does get blisters, he will have several weeks to heal before hitting the trail at Philmont and he will know where he needs to apply moleskin for protection.

One week before departure - Final backpack and uniform inspection. Every time that this final shakedown is held, it is amazing the amount of personnel gear that is still missing. Remind crew members to pack their boots. This may sound crazy, but on several occasions, boots have been left behind and had to be shipped overnight to Philmont. There are a couple of reasons for this. First, crew members typically don't pack boots in their backpacks before going out for a hike. They wear them! Second, trips to Philmont usually depart early in the morning when a teenager's mind is not working on all cylinders and boots hard to see, sitting on the floor. This is especially true if he has been up all night,

doing his final packing. Use the checklist included in Appendix E to ensure that you have everything before you head out the door. This final session is also a good opportunity to answer questions and pass out information to parents.

For crews that have never backpacked together, this training schedule represents the suggested minimum required preparation. Based on your crew's ability, you may elect to modify the number of hikes and meetings shown. Even with an experienced crew, it is still necessary to hold at least one day and one overnight shakedown.

There are four other measures that you can use to help bring your crew together. The first is the 50 Miler Award. All treks at Philmont have sufficient mileage to qualify your crew for the 50 Miler Award. However, the three hours of conservation work performed by each crew at Philmont is seven hours short of the ten hours needed for the award. This means that your crew will have to complete these hours of service work at home. There are numerous acceptable projects available at the local national, state, and county parks. This work is an excellent way to build crew camaraderie and provides service time for those Scouts needing it for advancement. If you finish the seven additional hours of conservation work before you leave, you can present your crew with the 50 Miler Award when they come off the trail at Philmont; a nice touch.

The second measure is merit badge advancement. Unlike other summer camps, Philmont does not offer merit badges. However, by planning ahead, every crew member should be able to earn Backpacking Merit Badge, especially if the crew is doing a higher numbered itinerary and it takes two or more shakedown hikes prior to leaving for Philmont. There will be many opportunities both during travel and on the trail at Philmont to teach and test Scouts on their knowledge gained. The crew may also want to consider earning Hiking Merit Badge and doing some preliminary work on Astronomy Merit Badge. You can't beat Philmont's night skies (for those that can stay up that late) for star gazing.

The third measure is to have the crew members complete the Leave No Trace (LNT) Awareness Award as part of their pre-trek training. Boy Scouts of America and Philmont have adopted the LNT principles as the means to instill an awareness of minimum impact backcountry camping and hiking skills. Excellent training material for crews is available at www.lnt.org

. Be sure to practice LNT during your shakedown hikes and while on the trail at Philmont. Better yet, take LNT back to your troop and make it a part of their camping practices.

The final measure is to develop your own crew t-shirt. A crew t-shirt helps to build crew unity and does wonders for crew dynamics. It lets other people at Philmont know where you are from. We have seen some really great crew t-shirts; some pretty funny. Gather your crew up and let their creative juices flow. Our crew t-shirt became the uniform of the day as soon as our Class A uniform shirts came off. The crew wore their t-shirts everywhere while in Base Camp. It also became our in-camp t-shirt while on the trail. We provided each crew member with two t-shirts and gave a t-shirt to our council contingent planner and our Ranger.

If your crew leader has not been predetermined, then sometime during the early stages of your crew training program, you should elect (or in some cases select) the crew leader and his assistant. You may even want to designate a crew quartermaster to be responsible for the crew's equipment. The crew training that has been outlined above provides an excellent opportunity to establish the crew leader's authority and let him grow into his job. We also believe that you need to have a specific training session for your crew leader and his assistant to review leadership styles as well as their roles and responsibilities in assisting you to get the crew ready to go to Philmont. Boy Scouts of America's Junior Leader Training syllabus has an excellent discussion of leadership styles. Another excellent resource is *Outdoor Leadership* by John Grasham, Mountaineers Books, (800) 553-4453. A crew leader's orientation, prepared by the Philmont staff, has been included at Appendix B. It is another excellent handout for your crew leader and provides some discussion points that should be included as part of your Philmont training program.

First Aid and CPR Certification

Philmont requires at least one person, preferably two (either an adult advisor or a crew member) in each crew to be certified in American Red Cross Standard First Aid, including CPR, National Safety Council Level II, or the equivalent. Several hours may be required for a Philmont medical staff member to reach a remote backcountry location. First Aid and CPR training will enable you to give proper and prompt treatment to injuries or illness until more skilled medical help can arrive. Be sure and bring your certification cards with you when you come to Philmont so that your training can be verified. Your Ranger will check your first aid and CPR certification cards upon your arrival at Philmont for verification during your inprocessing at Registration.

Medical Preconditions

The Philmont medical form, the *Guidebook to Adventure*, and this guide all make it a point to identify and discuss the very real risks involved in participation at Philmont and the medical preconditions which could elevate these risks. All potential Philmont participants, their parents and **their physicians** need to be aware of these risks and evaluate their ability to participate in light of their particular health history and medical preconditions.

Philmont is a big place and it could take several hours to get help in the event of a medical emergency. You do not want to be faced with a medical situation that could have been prevented with a little foresight and preparation. Philmont is extremely tough on letting people into the backcountry with medical preconditions. Crew members with high blood pressure, insulin-dependent diabetes mellitus, seizures, asthma or who must carry special medications will come under particularly intense screening during the medical recheck that is conducted during your inprocessing activities at Philmont. In 1992, it took Coop's crew almost two hours to clear the Health Lodge because one crew member had a record of asthma attacks that occurred several years before. Although this crew member brought an inhalator with him, he was required to buy two more that were to be carried by his tent buddy and an advisor. In 1996, an overweight Scout from our contingent, who also had asthma, never made it to the trail and was flown home two days after he arrived at Philmont.

It is imperative that you are aware of existing medical preconditions for all of your crew (including the adults). If you are not sure whether a medical precondition will keep a member of your crew off of the trail, send Philmont that person's complete medical records early and let them decide. In 1996, Coop had two of his crew members send their records to Philmont six months ahead of time. Ultimately, one crew member had to be dropped as result of this early screening. While at Philmont (and when on your training hikes before Philmont), it is important that the entire crew is made aware of any known medical preconditions, so if something should happen on the trail, they can be prepared. We have included at Appendix C, information on chronic illnesses that each crew member should receive early in the training program.

Emotional Problems and Learning Disabilities

Advisors should review individually with the parents any emotional problems or learning difficulties, including Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD), that their son may have. We know that Philmont can be a significant emotional and physical experience in the life of a crew member. It is therefore important to stress to parents that you will be acting as their surrogate for a two week period and that any information they share with you will remain strictly confidential. Although the Philmont medical form should contain all medications that are to be taken, some parents are reluctant to indicate that their son is taking something to help him control his behavior. Coop had a Scout try to hit another crew member with a shovel when he became emotionally stressed out. Fortunately, he was able to grab the shovel before anyone was hurt and calmed the Scout down. After the incident, Coop found out that the Scout was on medication for an emotional problem and that he had simply forgotten to take it.

On one of Wally's treks, a Scout with a learning disability needed to have instructions repeated three or four times until his brain made the connection. Although the Scout was really bright, it took repetition for him to completely understand instructions. When his crew went spar poling, Wally advised the backcountry staff and they provided extra help to successfully guide the Scout up the pole. The same was true for rock climbing. In addition, when this Scout was given instructions by other crew members who did not know of his learning disability, Wally would step in and calmly repeat the instructions to prevent the crew from becoming frustrated. Advisors, please talk to the parents of your crew members concerning any special situations that you should be aware of before you leave home.

Crew Equipment

There is an ongoing debate as to whether to bring equipment from home or use Philmont's. There are two reasons for bringing your own equipment. The first is that returning Philmont's equipment takes time. Every pot must be scrubbed and all tents must be dried. This is not to say that if you use your own equipment that you can skip this part, but it allows bypass the long lines of other crews waiting to turn in their borrowed equipment.

The second and more important reason for bringing your own gear is that your crew will have an opportunity to become familiar with it during your shakedown hikes. If you do decide to bring your own tents make sure that they are meticulously clean. This is especially true if you are using a troop tent. Who knows how many Hostess Twinkies, candy bars, and peanut butter and jelly sandwiches have been consumed inside! Bears and other animals at Philmont will be attracted to food odors on your tent. If your tents have never been washed before, sponge them out with warm water and a mild soap several months before you leave for Philmont so the fragrance can be aired out. Once the tents have been washed, we keep them with the crew until we go to Philmont to ensure that they do not get re-contaminated with food odors. Be sure to reseal all tent and tarp seams before you head for Philmont.

Stoves

When Coop first went to Philmont in 1958 as a Scout, all cooking was done over an open fire. Backcountry cooking changed a great deal since then (so has Coop!!) and stoves have become an essential part of crew equipment. We typically bring our own stoves from home. This way we can ensure that they have been thoroughly checked out before hitting the trail. However, many airlines will no longer accept stoves and fuel bottles as baggage and you will have to send them via parcel post or UPS to and from Philmont. Before packaging up your stoves and fuel bottles, they must be completely empty and as fume free as possible. If you are bringing a Peak 1 stove or any other type of stove that has a built-in fuel tank, empty all fuel from the tank and relight the stove. This will burn out any residual fuel that may be left in the bottom of the tank and in the generator. Once the stove goes out, pump it up again and let air perform a final purge of the system. Make sure that all fuel bottles are empty and have had a chance to air dry. Remember that you will have to perform these same procedures when you come off the trail in preparation for your trip home.

Philmont recommends that one stove be carried for each four crew members. However, because we use 4-quart pots, we only use two stoves, but carry a third for backup. Peak 1 white gas stoves seem to be the most popular at Philmont, but MSR Whisperlites, Coleman Apexes, and the new Peak 1 Max butane/propane cartridge stoves have also been seen in the backcountry. White gas and Peak 1 Max cartridges (introduced at Philmont in 1998) are sold at all commissary stops so you need not carry eleven days of fuel. If you use a white gas stove, we recommend that you bring along a Coleman filter funnel to reduce the possibility of getting dirty fuel. Be sure and give it to the commissary personnel to use when they fill your fuel bottles.

Whatever stove is chosen, it is important that you are familiar with it before you leave home. In his book, *The Complete Walker III*, Colin Fletcher says that most of the trouble with backpacking stoves comes from stupidity and neglect. Stupidity isn't readily curable; neglect is. Check your stove before you leave home and know how to safely operate and maintain your stove on the trail. Stoves demand your crew's respect and care.

Use a wind screen (store bought, natural protected area, or packs and people) to keep your stove lit in windy conditions. Make sure that your crew tops off the stove's fuel tank before starting a meal. It isn't easy to interrupt meal preparation for a refill and it can be dangerous with a hot stove. Make sure that your crew does not overfill their stoves. Both Peak 1 and Whisperlite stoves need an air space that can be pressurized when the stove is being pumped up. Beware of large pots. They spill easily and can entrap enough heat to cause your stove to explode. Fill your stove away from your cooking area so that any spilled fuel will not be ignited when you light your stove. Should your stove flare up, have a pot ready to place over it to snuff out the flames. Never use a stove in or near a tent. Never open the fuel cap of a hot stove. Always let a stove cool down before refilling or packing away. Stow fuel bottles and stoves in a pack's outside pocket. Make sure that tops are on tight and check (before you hit the trail) that the gaskets are not cracked and do not leak. Use a funnel or pour spout when filling a stove. Always empty your stove when storing it; old fuel can separate and gum up the generator. Carry a maintenance kit for your stove with you and KNOW how to use it. Better yet, give your stoves a complete check up before you go to Philmont and make sure they are ready for the trail.

The first rule in lighting a stove is not to light it until something is ready to be cooked or boiled. Likewise, never leave a stove burning with nothing on it. Crews waste gas by lighting the stove and waiting for someone to find the pot and get

the water. The second rule is to make sure that the fire circle is established. When the cook crew starts working, everyone seems to migrate to the fire circle, drooling at the mouth with cups and spoons in hand. If someone walks through the fire circle, he can easily tip a stove or a pot over, scalding the offender or innocent bystanders and wasting food. We know of a crew leader who had to come off the trail in 1999 because he was inside the fire ring and was burned by hot water. As a rule, once the stoves are lit, allow no one in the fire circle other than the cook crew. The penalty for the offender is that he gets to do the dishes.

A question that is often raised is how much fuel is required? IF 4-quart pots with tightly fitting lids are used for heating water instead of the large 8-quart pot that Philmont issues, and IF dish washing is performed as described in this booklet, and IF stoves are never lit until the pot is ready to be put on the stove, and IF the pot is taken off the stove immediately after the water reaches a boil and then the food is mixed in, a 32 ounce fuel container per stove is all that is required and it will last for four days of use. A suggested crew equipment list is contained in Appendix D.

Personal Equipment

For most first time Philmont hikers, it is not unusual to spend \$300 to \$500 in equipment. The most often purchased items are boots, sleeping bags, packs, and rain gear. Hopefully, the decision to go to Philmont comes prior to Christmas so that some of the gear may be obtained as Christmas presents.

Most outfitting stores recommend leather hiking boots for Philmont because of the support they provide when compared to high-tech synthetic boots. However, leather boots cost more and are harder to break in. Wally's son Wes required a new set of boots each time he went to Philmont because his foot grew. Spending \$125 to \$200 on leather boots just does not make sense when a synthetic pair of boots costing \$40 to \$90 will work just as well. Outfitting stores will also say that synthetic boots will fall apart due to the ruggedness of Philmont's trails. In his ten trips to Philmont, Wally has never seen a synthetic boot fail. Coop knows several Appalachian Trail thru-hikers that experienced no problems with synthetic boots. In fact, several thru-hikers preferred the synthetic boots because of their ability to dry out faster than all leather boots. The jury is still out on Gore-Tex boots. During Coop's 1998 Philmont trek, the boots that got the wettest during a heavy downpour were Gore-Tex. However, we also talked to several Rangers who loved their Gore-Tex boots. 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. If you do buy leather boots, make sure that they have been waterproofed several times before you head to Philmont.

Each crew member should wear two layers of socks. The inner layer should be 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 crew members do not like the feel of wool socks and they take a long time to dry out once they get wet. Both Coop and Wally use Thorlo socks. Coop likes the all-synthetic Thorlo Hiking sock that does it not itch and dries quickly because it contains no wool. Wally uses the Thorlo Light Hiking sock that contains only 5% cotton, making it ideal for warm weather wear. Mimi Hoyt uses the new Smart Wool socks that were recently introduced on the market. Even though they do contain wool, they still dry much quicker than the all wool ragg socks. Like most backpacking equipment, it really comes down to a matter of personal choice. Whatever type you use, pack three pairs of outer socks and two or three pairs of sock liners. Make sure that you check the condition of your crew's socks before you head for Philmont. Too often, crew members 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.

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. In past years, Teva sandals were often used as in camp shoes. Philmont now 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 you may want to reconsider bringing Tevas. We both still bring our Tevas because we love them and put boots on when they are required. Getting into in-camp shoes gives your feet a rest and gives you an opportunity to sun dry your boots. You may want to bring along a set of wool in-camp socks. If you are in the high country, sandals alone can be pretty cold. 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 enough for you to hike in to the next camp site, if you are having severe boot problems.

You will see many different styles of walking sticks on the trail. Some hikers prefer a single stick. However, over the last several years, Coop has become an ardent believer in using two walking sticks. The sticks are adjustable and can be lengthened or shortened according to the terrain. They provide much needed support and relieve some of the pounding

that would normally be absorbed by your body. A medical study has shown that the use of two hiking sticks results in 250 tons of pressure being transferred from the back, knees and legs to the arms during an 8-hour hiking day. They also serve as poles for the crew tarp eliminating the need to carry additional equipment. They can be a pain if you are crew photographer trying to take a picture.

An inexpensive pair of ankle high gaiters is nice to have. Gaiters help keep your boots and socks clean and dry. They also prevent small rocks and sand from getting inside your boots.

Sleeping bags should be filled with synthetic fiber, weigh less than four pounds, and be rated to 25 degrees. A mummy bag is lighter and warmer than other design types. At Philmont's higher elevations, the temperature gets into the thirties at night and there always seems to be a stiff breeze blowing. Other than boots, the sleeping bag is the most important piece of equipment a crew member will bring to Philmont. Crew members 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. Care must be taken to assure that the bag is properly treated. Crew members must never get into their sleeping bags wet, because the moisture reduces the warming ability of the bag. During the night, the bag also absorbs moisture from the body. Every opportunity should be taken to air out the bag. Otherwise a 25 degree bag will become a 30 degree bag the next night and so on. Down sleeping bags are not recommended because they lose their insulating capability when they get wet. Even though most sleeping bags come with a "water-proof" stuff sack, an additional plastic trash bag or an Army waterproof bag should be placed in the stuff sack to provide a second layer of protection.

An inexpensive closed cell pad is a must for all crew members. 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 tents leak in a heavy rain. Cascade Design produces the Z-Rest, an excellent pad that is very comfortable, is less bulky than traditional pads, and can even be used for a camp seat! For advisors, we recommend a Therm-A-Rest sleeping pad because of its ability to provide a good night's sleep. It also adds 5-10 degrees of warmth when compared to sleeping directly on the ground. While a Therm-A-Rest pad costs around \$50, it is well worth the investment. Therm-A-Rest pads come in two models; the full length and the 3/4 length. Although the full length model is a little heavier, it keeps the feet off the ground that could keep the sleeping bag dry should your tent floor get wet.

It is really difficult to give advice to crew members 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. If a crew member has money to burn, a Gore-Tex rain suit would be 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 light weight 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. Our Philmont Rangers thought that an inexpensive rain suit was 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. Sarah Rogers, a Philmont Ranger, has been known to stand in the shower at home to check out her raingear!

Most crew members wear hiking shorts and t-shirts throughout their trek. What we have found that works the best is to have a set of hiking clothes and a set of in-camp clothes. After setting up camp, wash the body salt from the t-shirt, shorts, and socks you have worn on the trail. Put up your clothes line and hang your hiking clothes up to dry. Be aware that some Philmont Rangers have discouraged tying clotheslines to trees (even if the trees are protected by putting bandannas around them). Hanging clothes from branches works just as well. In the morning, even if your hiking clothes are not completely dry, put your t-shirt and shorts on. Don't worry, they will dry out while on the trail. Wet socks can be safety pinned to the outside of your pack to dry as you walk along the trail.

Cotton underwear? No way. Both Wally and Coop use nylon blend hiking shorts with an inner brief to provide support. The smooth surface of the nylon shorts also helps to reduce the chaffing for hikers with thunder thighs like the two of us. George Kain wears a set of synthetic (CoolMax) underwear under his Philmont cotton shorts. Other advisors have worn unpadded nylon bike shorts or a Speedo swim suit under their hiking shorts for support. All of us agree that cotton underwear is impossible to keep clean and dry.

We recommend as a minimum that the t-shirts be 50/50 cotton. If you can find an all synthetic t-shirt (Philmont now sells a Duofold t-shirt in the Trading Post), use it for your hiking t-shirt. Road Runner Sports, (800) 551-5558,

www.roadrunnersports.com, sells CoolMax shirts at very competitive prices. Synthetic t-shirts will wick the sweat away, protect you from losing heat due to moisture during colder weather, and dry quicker when washed.

Crew members will also need a set of sleep clothes (t-shirt and a set of nylon running shorts) that is only worn while sleeping. When getting ready for bed, each crew member takes off his in-camp clothes and places them in a plastic bag that is then thrown away from the tent. After putting on his sleep clothes, the crew member can get in his sleeping bag. This will reduce the possibility of having any sort of food smell on you or inside your tent that may attract bears. In 1996, because of the poor snow pack and lack of rain, there was very little for the bears to eat, so they moved into Philmont's low country looking for food. Rangers will spend a great deal of time discussing your crew's actions to minimize the chance of a bear incident occurring, including the use of sleep clothes. Another way that crew members can bring non-human smells into the backcountry is through the use of fabric softeners on their trail clothes before they arrive at Philmont. Fabric softener fragrance will last on trail for several days until an individual's natural body odor takes over. You may have to wash your clothes several times without soap at home to ensure that there is no detectable odor. Remember, bears don't see well, but they have a tremendous sense of smell. The bottom line is if you are going into bear country, it is best to sleep in clothes that have not been exposed to any smells.

A set of lightweight synthetic (polypropylene or other type fabric) long underwear can be a plus on the trail, especially if you are scheduled to arrive at Philmont early in the camping season when the mornings are still cold. Long underwear can also be used as a means of increasing the warmth of your sleeping bag, especially if your trek has you camping at higher elevations. We suggest bringing your long underwear with you and making the decision whether you will bring it on the trail during your shakedown at base camp. In 1997, no one in Mimi's crew (with the exception of one adult) brought long underwear on the trail and they did not miss it. However, Peter Bernier, a member of Coop's 1996 crew, wore his polypro to keep warm during several hailstorms and heavy rains that occurred during his 1997 Rayado trek. Again, it is a matter of choice.

An outer warm layer is absolutely required. Although wool has been a traditional choice, synthetic fleece has taken over because of its light weight, ability to dry quickly, and softness. **DO NOT rely on cotton sweat shirts to keep you warm!** A wool knit hat is an optional item but is nice to have. Most crew members will wear their knit hats especially at the higher elevations and at night. Both Wally and Coop have used their knit hats each year they have gone to Philmont.

Long pants are required for spar poling, horseback riding, branding, and the conservation project in addition to the obvious of keeping warm. Most crews we saw wore high nylon content pants that were extremely lightweight and dried out very quickly. Convertible pants with legs that zip off allow you to carry long pants and an extra pair of shorts with just one garment. An acceptable substitute is to wear your long underwear bottoms under a pair of hiking shorts. Stay away from jeans or sweat pants. Both are made of cotton and are impossible to dry out once they get wet.

Some hikers like wide brim hats. They provide protection from the increased level of ultra violet rays found at higher elevations, but are cumbersome while hiking. If a baseball cap is used, be careful of severe sunburn on the tops of the ears. For fair complexion crew members, we recommend a 30 SPF sun screen as a minimum. Coop uses 50 SPF because he has fair skin. The sun and low humidity can also cause severe chapped lips. The one lip balm that seemed to work best and received outstanding reviews by both our crews was Carmex. There are also other lip balms on the market that contain sunscreen that can reduce the possibility of sun burned lips.

Each crew member needs a minimum of three 1-quart canteens. If you know that your itinerary will have a dry camp, we suggest that each crew member bring along a lightweight 1-quart plastic bottled water bottle (or better yet, a roll-up canteen made by Nalgene) in addition to the regular canteens. Because it was an exceptionally dry year at Philmont in 1998, each member of Coop's crew had the ability to carry four quarts of water. It is a lot easier to supply the crew with water if each crew member carries an additional quart of water into a dry camp instead of having one or two members try to carry the very bulky and heavy 2 1/2 gallon plastic water containers.

A butane lighter works better than matches and is more dependable. Get a see-through type so that it is easy to determine when the lighter is out of butane. Each crew needs a sewing kit with safety pins. If an advisor travels a lot, ask him to take one from a hotel where he stays. Heavy duty thread and needles need to be added to this kit in case a pack comes apart. Duct tape comes in handy along the trail for all sorts of jobs from patching tents to attaching a loose sole of a boot. An easy way to carry duct tape is to wrap it around a fuel bottle. Remember that duct tape is also considered as a

"smellable" and must be put in the bear bag.

If you can find an old closed cell sleeping pad, you can make your own "Advisor's Pad" to sit on by simply cutting out a two foot square section. An alternate is a closed cell kneeling pad sold at most lawn and garden shops. It sure is a lot more comfortable than sitting directly on the ground. For those advisors who may have a "deep seated" problem, fold the pad in half to double the cushion. We are also seeing more Crazy Creek chairs on the trail. They provide both bottom and back support and can be used as a sleep pad by those who are really trail nuts. But if you do use your chair as a sleeping pad, be very cautious when eating in you chair to avoid carrying smells from spills with you to bed.

Be sure to mark all common items such as canteens, ragg socks and sock liners with a permanent marking pen. Things begin to look alike after ten days on the trail and it becomes hard to tell them apart. A suggested personal equipment list is contained in Appendix E.

Finally, try to get your total pack weight as light as possible. Heavy packs just sap energy and strength, make you more prone to injury, and reduce your potential for having a good time on the trail. Both Bob Klein and Troy Hayes are real sticklers when it comes to reducing total pack weight. Bob even gives his crew a list of equipment with the maximum acceptable weight for each item of personal gear. He even brings a postal scale to gear shakedown and weighs each item to make sure that meets his criteria! If an item is too heavy, it is rejected! You may think that this might be extreme, but Bob's crews typically leave Base Camp with water and food with packs that weigh under 35 pounds, compared to most crews with pack in the 40 to 50 pound range.

Some advisors are still in the car camping mode when they arrive at Philmont, bringing along that extra something "just in case". The idea is to leave Base Camp, with the lightest possible pack, with the right amount of personal and crew gear for your trek and no more. Start eliminating ounces from your very first shakedown. A requirement for *Backpacking Merit Badge* is to discuss ten ways to reduce your pack's weight. Some ideas include:

- small rather than large (as in flashlight, knives, etc.)
- right size (e.g., a 4 ounce bottle of sun screen instead of a 6 or 8, a small tube of toothpaste)
- just-as-good-but-lighter (coated nylon rain gear instead of PVC, grocery store water bottles instead of canteens)
- double duty items (bandanna can serve as a towel, handkerchief, and headband; synthetic long underwear top can keep you warm in the campsite and serve as sleep shirt)
- avoid gadgets (such as Leatherman, hydration systems, heavy camp stools)
- sharing (one set of toothpaste or Camp Suds bottle per tent)
- smart purchasing (mummy bag versus a rectangular bag)
- clothing system based on layers
- take only what you need (a cup and spoon for eating gear instead of a cup, bowl, spoon and fork)
- eliminate dead weight (walkman radios, footballs – yes Troy Hayes has seen one!)

There are a growing number of ultra-light backpackers who would have a field day with the gear that we take to Philmont. We would have to give up our full-length Therm-A-Rest pads, our in-camp clothes and our camp shoes! These minimalists, however, have the experience, confidence, and physical conditioning to compensate for any mistakes they might make in packing that we as advisors cannot. We encourage you to work with your crews to reduce the weight that each member will carry and believe that the equipment lists in Appendices D and E have been tested over time and represent what you will need on the trail at Philmont. However, for those of you who might be tempted to try the ultra-light method of backpacking (on your own first and not at Philmont), an excellent resource is *Beyond Backpacking, Ray Jadine's Guide to Lightweight Hiking*, AdventureLore Press, (800) 247-6553. While we don't agree with everything Ray Jadine has to offer, he does present a different way to approach gearing up.

Packs

Unless you come from a very unusual Scout troop, this will probably be the first time that you or your crew members 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. We find that most Philmont hikers get a new pack before their trek. As an advisor, 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 are the most common and cost significantly less than internal frame packs. They allow you to strap on additional equipment giving you greater flexibility in what you can carry. External frame packs usually come with lots of built in pockets that provide easy access for needed gear. They are also cooler to wear which is a significant plus in the New Mexico afternoon heat. An external frame pack for a Philmont trek should be a minimum of 4000 cubic inches.

Internal frame packs are basically 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. External frame packs feel more like wearing a ladder when compared to the fit of an internal frame pack. Since sleeping bags are carried inside of an internal frame pack, minimum size for a Philmont trek should be no less than 4500 cubic inches. Both Wally and Coop began backpacking with external frame packs but have switched because we like how internal frame packs feel and carry the loads.

No matter which type of pack you have, there are four things that you must do to ensure that your crew is ready to go. First, check to see that the pack is fitted to the individual crew member. The hip belt must fit snugly around the waist to allow the full weight of the pack to be carried on the crew member's 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 Scouts 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. Third, make sure that the pack is large enough to carry all the crew member's personal gear plus his share of crew gear. Make sure that each crew member brings along one or two replacement clevis pins and O-rings. JanSport packs require special nuts, bolts and wrenches that are not readily available at Philmont. Finally, we both recommend bringing a pack cover that is designed to fit your pack. A pack cover will beat a trash bag any day. However, trash bags will work. Just plan on bringing several (4-5) because they will rip and tear on the trail. If a crew member does not have a pack that you deem adequate, he can rent one at Philmont for a very reasonable cost (1999 cost was \$18.00).

Photography

The two most asked questions concerning photography at Philmont are how much film do I need and what film speed should I buy. Wally took 180 pictures during each of his first three trips to Philmont. In 1992, he took over 500 because he was part of a crew film cooperative effort (more below)! The answer is that you never can have enough film. Although trading posts carry film in the back country, sometimes they are sold out and you may not have another opportunity to buy film for several days. You also do not need to buy the more expensive high speed film. On the trip to and from Philmont, use 200 speed film. At Philmont with its bright surroundings, you can use 100 speed film.

Developing film may not seem like a major concern, but some places do develop film with a higher quality than others. On each of Wally's first four trips to Philmont, he used a different film processing company. Coop has used both Seattle Film Works, (800) 445-3348 and REI Photo Service, (800) 448-0491 that have film that can produce both slides and photographs. He has found that slides are a much easier medium to use when showing your Philmont experience to a large audience.

Crew members love to bring cameras but generally take few good pictures. During Wally's first three trips to Philmont, he took pictures and offered the negatives to crew members who wanted selected prints. Some negatives from his 1991 trip still have not managed to find their way home! A better way is to have the advisors take the pictures and offer the finished product to the crew. However, should you become the official crew photographer, you will find that you are the one that is continually left out of the crew pictures. You may want to take two cameras so that you will always have a back-up in case one has a problem. You will also have two advisors taking pictures so that each will be featured in some shots.

During Wally's 1992 trip, the ultimate solution was "developed" - a film cooperative in which each member received a

copy of all the pictures taken by members of the cooperative. The co-op used two or three high quality cameras with telephoto lenses that were carried and used by advisors. Crew members did not have to carry cameras that meant less weight for them. Each member shared equally in the cost of the film and its developing. Nine crew members representing every family in his crew decided to join the co-op. The final cost per member was \$53 for almost 500 prints from 14 rolls of film. Advisors also were featured in more pictures thus giving them more memories. If you decide to form a film co-op, call Seattle Film Works or REI Photo Service to set up an account. Troy Hayes has taken the film co-op to a new level by digitizing the negatives and putting the results on a compact disk. The digitized pictures can be placed in a document and printed using a color printer to tell their Philmont story.

The following are some photographic tips for Philmont:

1. Cold temperatures (especially in the high country) eat weak camera batteries. When climbing Baldy or Mount Phillips, you may want to keep your camera inside your outer garment just to keep it warm. Be sure and purchase new batteries before you go. Coop always takes along a spare set, just in case.
2. The best time to take pictures from the top of Baldy Mountain is between 9:30 am and noon because the sun will light up the spectacular scenery behind Baldy.
3. The best time to take pictures from Window Rock and Cathedral Rock is between 1 pm and 4 pm. WATCH OUT FOR AFTERNOON STORMS.
4. The ideal time to take pictures from Trail Peak, Shafers Peak and the Tooth of Time is 11 am to 1 pm because these locations offer panoramic views and the sun is in the best location. BE CAREFUL OF LIGHTNING STORMS!!
5. You can take pictures of Baldy Mountain from the top of Comanche Peak from 7:30 am to 1 pm. After 1 pm, the sun is in the perfect position to take shots of Tooth Ridge.
6. Philmont offers some of the best campfire programs. However, a flash is required. Remember that flash shots are only good if the camera is 10 feet or less away from the subject.
7. Bring your camera to all program areas. They offer some great opportunities to take pictures of your crew in action other than hiking.
8. When photographing faces, especially within 15 feet, use the fill flash mode (if available on your camera) to avoid shadows on faces.

ARRIVAL AT PHILMONT

Be Prepared

When you arrive at Philmont, both you and your crew are going to be pretty excited. After months of planning, you have finally made it! However reality sets in when you realize that you will be just one of 30 crews that have arrived that day. Each one of these crews will have to go through the same inprocessing routine. We have found that if you and your crew are prepared for inprocessing, the time can be shortened and the amount of confusion can be lessened. Try and remember that the order of the inprocessing activities described below will vary depending on the number of crews that arrive at the same time that you do. Although you may feel that inprocessing activities are being done in a haphazard manner, your Ranger is following the rule of "scramble, be flexible" to get your crew completed as soon as possible.

Welcome Center

When you first arrive at Philmont, get your crew to form a pack line outside the Welcome Center. You and your crew leader will go inside and meet your Philmont Ranger. By the end of your Ranger's three day stay with you, all your crew members will all want to return to Philmont and be a Ranger when they reach eighteen. These young men and women are cool and confident. They are experienced in the backcountry, have been taught the Philmont method of hiking and LNT camping, and are skilled in dealing with group dynamics. Your Ranger will also be a Godsend in base camp. He or she is skilled at getting your crew through Registration, Logistics (better known as Log Jam to the Rangers), and Services.

Registration

After leaving the Welcome Center, your Ranger will take you into Registration where you will receive envelopes to secure valuables that you do not want to take out on the trail and information concerning services available at Base Camp and the backcountry. At Registration, Philmont will also check your crew's first aid and CPR certification, so have your cards ready.

Logistics

After leaving Registration, your Ranger will want your crew to bring all their gear to their assigned tent area. Before heading to your tent area, ask your Ranger if your crew has a preassigned appointment time. Because of the large number of crews that inprocess each day, you and your crew leader need to be ready and waiting at the door outside of Logistics when your appointment time arrives. If there is any way of getting an earlier Logistics appointment time, the better off your inprocessing will be. Getting through Logistics quickly is the key to the rest of your inprocessing activities. When you arrive at your tent area, be sure and stress security of personal and crew gear. Keep packs inside your tents and make sure that your tents are tied shut when you leave the area.

Logistics is where your itinerary gets finalized. Take as much time as you need to get the details of your trek nailed down. In 1999, Philmont began a tougher policy regarding itinerary changes allowing none unless there was a *bona fide* medical reason. Making changes on your own while on the trail is strictly frowned upon. Prior to going to Logistics, make sure Expedition Crew Roster is completely filled out. Names on the crew roster and medical forms should be put in the following order; crew advisor, assistant advisors in alphabetical order, crew leader, and the remainder of the crew in alphabetical order. You may consider assigning one advisor with the responsibility for reviewing and maintaining the roster along with your crew's medical forms. An incomplete entry will significantly increase your inprocessing time.

While the advisors and crew leader are the only ones allowed in Logistics, the staff prefers to deal directly with just the crew leader. Decisions that may seem to be minimal to you, will be a real responsibility for your crew leader. You should coach your crew leader before arriving at Philmont to ensure that he asks the right questions. The following are some considerations:

a. Water Board

Philmont water sources are posted on a water board immediately inside Logistics. The board indicates the type of water source (faucet, well, spring, streams) and the date it was last checked. All water sources must be purified unless a staff member lets you know that it has been chlorinated. In 1998, Philmont provided the crew leader with an updated list of water conditions that he could use for planning purposes. If you pass a water source, always refill all your canteens and "camel up" (more on cameling up later). Always plan for the unexpected. It can be very hot at Philmont and there is no way to know if the next water source will be dry. Recording water sources will only take a few minutes, but that information can save you a lot of needless hiking and the possibility of becoming dehydrated. Pay particular attention to recording water sources before and after a dry camp.

b. Trail Board

The large scale Philmont maps sold at the Trading Post (see the Terrain Awareness section) are marked with projected trails yet to be completed. In addition, Philmont adds new trails and closes down others each year for repair due to overuse or winter washout damage. Make sure that your crew leader checks the Trail Board and marks these trails on his map. During Coop's 1986 trek, we missed noting that the trail along the Rayado River was closed. Instead of a simple four mile hike from Abreu to Fish Camp, his crew ran out of trail and wound up carrying their packs on their heads as they forded waist deep water several times until they were able to bushwhack back to an existing trail.

c. Horse ride time

Make sure that the crew leader understands the distance that has to be hiked to get to the horse riding location. Horse riding times are generally at 8 am and 1 pm. The morning times are generally better because the afternoon times may be canceled because of thunderstorms. One year, Wally's crew had to hike 5 miles to get to an 8 am horse riding appointment. Because it always took the crew 2 1/2 hours to leave camp, they would have had to get up at 3 am just to meet the start time for the horse ride! If the crew is scheduled to camp at the horse riding staffed camp, consider riding the next morning. That will give the crew enough time to get to the camp, relax and participate in the other programs

offered such as boot branding and chuck wagon dinner.

d. Returning Lunch

The crew leader must decide which type of lunch is needed for the last day on the trail. If your crew is being bussed in, this decision is an obvious choice based on your return time. However, if the crew hikes over the Tooth of Time to get back into base camp, then it will be necessary to determine when the crew will return to base camp. If you are staying at Tooth Ridge camp your final night, you will most likely make it into Base Camp before lunch. For all other camps, you should probably carry your final lunch with you.

When you leave Logistics, your crew leader will be given the approved itinerary (better known as "Your Life") listing all commissary stops, your scheduled horseback ride time, your conservation project location and the bus times for your trip out and back in. This is an extremely important document and must be presented by your crew leader at every staffed camp and when you pick up food. Your crew leader should keep "Your Life" in a waterproof plastic bag at the very top of his pack.

Crew Photograph

After leaving Logistics, try to get your crew's color photograph. Since Philmont only takes crew photographs in the morning when the sun's rays illuminate the Tooth of Time in the background for your photograph. If you want your crew photograph done in your Class A uniform, it is best to get it taken on the first day, so you can get out of your Class A uniform for the remainder of the inprocessing. Make sure to you have your personal cameras available and ask the Philmont photographer to take any personal photos.

Medical Recheck

The medical recheck begins with your Ranger. He or she reviews each crew member's medical form for completeness. Hopefully, you have already reviewed each form prior to leaving for Philmont. Items often needing additional information are:

- a. Name, address, social security number, family insurance policy and number, person to be contacted in case of emergency with phone number (including area code) must be completed for each crew member.
- b. Health history must have a yes or no for each item. Any allergies should be indicated and should be known by the advisor prior to leaving home.
- c. Be sure to indicate any injuries or illnesses that occurred during the past year. Your Ranger will be looking for anything that might put a physical restriction on one of your crew members.
- d. If one of your crew members is taking any form of medication, make sure he carries it down to the health recheck. Your Ranger will check to ensure that the medication is up to date and there is enough to last in the back country.
- e. Be absolutely sure that the date of last tetanus inoculation is completed and the date is within the past 10 years. If not, the crew member will be required to get one at Philmont. In 1995, a member of Wally's crew had to get a new tetanus booster, even though he still had 2 1/2 months before his old one expired. Can you imagine getting a shot and then going backpacking the next day?
- f. Make sure that the physician certifies that the crew member is cleared to physically participate in each activity listed on the back page. He should then sign the form, print his name legibly, and include his office address and telephone number (with area code).

After your Ranger completes his preliminary review and your crew members have phoned home to get the missing information, the crew will be taken to the health lodge so that each crew member can be screened. Each advisor will be required to have their blood pressure taken. Philmont requires that your blood pressure be less than 150/95 to be allowed on the trail. However, the effects of altitude, excitement, and stress from being with Scouts for a few short days can elevate your blood pressure above your normal pressure back home. Advisors are often asked to have their pressure retaken the next morning. DON'T WORRY, this is a common occurrence. Here are some actions that you may consider before getting your pressure taken at Philmont:

- a. Caffeine makes the heart beat faster and raises the blood pressure. Try not to drink coffee or cola the day before getting your pressure checked.
- b. Retention of water will elevate blood pressure. Be very careful of salty foods eaten in route to Philmont. The night before arriving at Philmont and the morning of the medical recheck, eat a banana and drink a glass of orange, grapefruit, or pineapple juice. The fruit provides your body with potassium that will help rid your system of any excess water.
- c. Separate yourself from your crew while waiting for your medical recheck. During this time, meditate, pray, sleep, or just generally rest. This is probably tough to do because of your anticipation to get on the trail.

If your pressure is too high, you will be asked to lie down for about 30 minutes. Try to sleep if you can. If it is still too high, you will be told to return the next morning when your blood pressure should be lower, especially if you've had a good night's rest. However, if it is still elevated, you will be asked to lie down for 30 minutes and your blood pressure will be retaken once more. If still too high, you will be referred to a doctor or a medic who will review your medical form and your blood pressure results. One of the first questions you will be asked by the doctor is to thoroughly describe your pre-Philmont exercise program, so be ready. If you already know that you have a high blood pressure problem, bring as much documentation as possible so the doctor or medic is better able to make an informed decision on whether you should be allowed to go on the trail. In 1998, Wally and his local doctor knew that he had high blood pressure. So when he failed the blood pressure test at the Health Lodge, he was able to give Philmont's doctor his cardiologist's report, a stress test report, an EKG, his blood pressure log and his exercise log. After reviewing all the documentation, the doctor released Wally for the trail.

Be assured that the medical staff will do everything possible to get an advisor in the back country with his crew. This may even include prescribing medicine to regulate your blood pressure (if this happens, you will incur a \$5 co-payment). If you know that you may have a blood pressure problem while at Philmont, talk to your local doctor before you go about what he recommends should you need some medication. Should you or your doctor have any doubts about your blood pressure, you should contact Philmont before you arrive.

Services

With your itinerary finalized, your crew will head to Services where they will pick up crew equipment and receive their first food issue. If you brought the majority of your crew gear, this should not be a lengthy process. Whether you brought your crew gear or not, your crew members should carefully inspect each item of issued crew gear for two very important reasons. First, if it won't work in base camp, it certainly won't work on the trail. Secondly, your crew will wind up buying a piece of gear that is found to be defective when you return. Your crew leader will need "Your Life" when he goes to pick up food. The crew should carefully count the number and type of food packets by meal to ensure a correct issue. They should also return any package that is torn or has holes in it. You do not need food leaking in packs on the very first day. While at Services, you will have an opportunity to buy fuel for your crew's stoves. Have the crew bring the empty fuel bottles and fuel filter with them when they leave the tent area. It is a long walk back!

At Services, an advisor will be able to pick up crew mail. Both Coop and Wally **have made it a point** to talk to parents ahead of time to ensure that there will be a letter waiting for each crew member when he arrives at Philmont and when he comes off the trail. These letters do have a profound effect on the crew because it lets them know that there are people back home that are thinking about them. Crew members should also purchase stamps here since they are sometimes not available in the back country.

Security

At Security, you will receive key for your crew locker to store everything that will not be taken on the trail. The lockers are 21 inches wide by 22 inches high by 31 ½ inches high. If you have a large crew (greater than 10), ask for a second locker when signing for the first one. If one is available, you may get it assigned to your crew. The bottom line is to limit the extra junk that you bring to Philmont.

Villa Philmonte

During your inprocessing, make sure to get a time to visit the Villa Philmonte, Waite Phillips' home. It is a beautifully restored home and will give you an appreciation for the man who donated the land that came to be Philmont. For those

crews hiking through Hidden Valley, be sure to check out the view from the villa's Window Rock window.

Ranger Training

While at base camp, your Ranger will begin his Ranger training by conducting a thorough shakedown of your crew's personal and crew gear to ensure that you are prepared for the trail. Although you may feel that your Ranger's attention to detail is not needed, please remember that the majority of crews that come to Philmont have very little practice in backpacking. In the past, some advisors (especially the more experienced advisors) have resisted their Ranger's efforts because they felt as if the Ranger was trying to undo the all training that they had tried to instill in their crews. These advisors really needed to give their Rangers the space to teach their crews the "Philmont method". Please remember that Philmont is constantly changing and upgrading their training so that your crew can have the best and safest experience possible. If you should disagree with some of the training given by your Ranger, do not argue with him or her in front of the crew. A better way is to quietly share with your Ranger away from crew why you do things a certain way. Karl Cheng, Wally's 1993 Ranger stated that Rangers want to be included in any discussions on backcountry training methods and do not shoot down your ideas just because they are different. In the past, ideas brought in by crews have had an impact on Philmont's training program. Remember, Ranger training is another voice teaching the latest methods of LNT camping that have been found to work at Philmont. Take advantage of it!

ON THE TRAIL

Hiking Techniques

The first rule to hiking is that the crew must always stay together regardless of the pace. Every crew will have its slowest hiker and that person is almost always an adult. Even with intense physical preparation, youth will always seem to recover faster than the older advisor. Around day seven, some adults may have a hard time overcoming the aches and pains that the younger Scouts do not have. Advisors may want to bring an anti-inflammatory such as Advil, Aleve, Motrin, or Nuprin that contains ibuprofen. If taken before hiking and at the end of the day, this supplement can reduce the pain and inflammation of body joints.

Crew members are smart. They will know who has physically prepared for Philmont and who has not. A helpful hint to the advisors. It is OK to apologize to your crew for being slow. They really appreciate it when you take the time to thank them for slowing down to give you a break. Some of them would rather walk at your pace anyway. Wally was the slowest hiker on four of his trips to Philmont. After apologizing to his crews for being so slow, he was overwhelmed by their response when they began encouraging him. The crews realized that they had to hike at his pace and they remained at that pace for the rest of the treks. Another approach is to tell your crew that they need you more than you need them. That does not work too well though. The key is to have done your best in preparation. The crew will know it.

Philmont recommends taking a short "packs on" break every 30 minutes or so for a quick drink of water. Every hour, Philmont recommends that the crew take a longer "packs off" break to check their feet, get a drink of water, and make any necessary clothes or pack adjustments. Taking these breaks not only ensures that you stay hydrated but it also conserves your energy over the length of the day. If you feel like you need to take breaks more often, you are probably setting too fast a pace. You don't want to arrive at your next camp early, only to be too exhausted to enjoy it.

A technique that we have found that helps keep the crew hiking together at a steady pace up steep hills is called the "caterpillar". Imagine the track of a tank. Half the track is on the ground while the other half is moving. This same concept can be applied to hiking. When a crew member calls for the "cat", the leading member of the crew steps to the side of the trail taking care to pick a location that will not cause erosion or widen the trail in keeping with LNT principles. The next hiker takes 3 steps past the crew leader and then steps off the trail. As each hiker becomes the first in line, he takes 3 steps and steps off the trail. When the last person in line has passed the leading member by 3 steps, the leading member rejoins the moving section of the hiking line. On long fairly flat trails or on downhill sections of trail, the caterpillar can be employed every 10 minutes so that each hiker can at least see each other thus breaking up the hike. Finally, when caterpillaring, stand, do not sit, backwards to the trail. This will rest the muscles used for climbing. Plus it will enable you to see the scenery behind you. We taught the "caterpillar" method to several crews that we met on the trail and they loved it!

A technique that can be used to rest leg muscles on long uphill climbs is the "rest step". When crews begin climbing

uphill, there is a tendency to support the weight of the hiker on the front part of the foot. This is a natural reaction on steep inclines because the ground slopes away from the heel of the foot. Because the entire bottom of the foot is not on the ground, the calf muscle must provide the support for the leg. This is an easy way to tire yourself out. When climbing uphill, get your crews to keep their foot flat on the surface of the ground. As you step forward on your foot, lock your knee for a moment before taking the next step. This move does two things. First, when your knee is locked, the skeletal frame of the leg takes all the weight allowing your muscles to relax for an instant. Second, it provides an opportunity to slow down the pace and take a rhythmic breath. The "rest step" technique may be done every step, every third step, or every fifth step depending on the steepness of the climb and the altitude. Like the caterpillar, it gets you up the hill slower, but you will find that you can hike longer without requiring numerous breaks.

As a courtesy to other hikers on the trails, crews hiking downhill always move off to the side when meeting a crew coming up the hill. The trails are too narrow for two crews to pass each other and it is a lot harder to get started uphill once you had to stop. When you do step off the trail to allow another crew to pass, face inward toward the trail. If you face outward, your pack will hang over making it difficult for the other crew to pass. Besides, if you face inward, you can see if the other crew looks worse off than you do. You may also meet crews or staff on horses. In these situations, horses always have the right of way. Crews should move on the downhill of the trail so as not to spook the horses.

Another courtesy that is appreciated by staff members in the back country is not to come up on a staff cabin porch unless invited. During the summer months, staff members must call these cabins their home and it is tough to have 20,000 guests tramping in and out of their house!

Terrain Awareness

In 1991, Wally's crew took Trek 24, which then was the hardest trek. For the first six days, the crew members made the decisions on which trail to take. As a result, wrong trails were selected making an already difficult trek even harder. Finally after two advisors developed severe foot problems, the advisors began to take a more active role in making trail selection decisions. The fact remains that for most Scouts and in some cases for their advisors, basic map and compass skills are lacking.

We define terrain awareness as the ability to use these basic map and compass skills along with the natural features of the wilderness environment to help determine your location. For example, if the map indicates that Bonita Peak will be on your left as you walk along the trail and all you see is a beautiful mountain meadow, chances are that you are on the wrong trail. This actually happened to Wally's crew. When it was pointed out to the crew by an advisor that the peak wasn't to their left, it was their first indication that they were not on the right trail. The crew members simply did not know what terrain features to look for as they walked along the trail.

We both feel that it is important for each crew member to have the opportunity to be the navigator (or in some cases better named as the "naviguesser" or "Magellan") for the day. The navigator is responsible for carrying the map and compass and leading the crew while on the trail. We have found that the best way to teach terrain awareness skills is by hands-on practice. It also gives the navigator a chance to assume a leadership role within the crew for the day. Finally, the use of a navigator satisfies one of the requirements for Backpacking Merit Badge. After supper, the advisor should sit down with the navigator and help him profile the route to be covered the next day.

A profile is nothing more than a graphic that depicts the elevation over the length of the trail to be hiked that day. There are a couple of different ways that a profile can be made, but each starts with an approximation of the horizontal distance to be traveled. This can be done by simply reducing the trail into a series of sequential straight line segments and using the scale at the bottom of the map to determine the mileage to be traveled. Coop now uses a map wheel made by Silva that records the distance for any of several different map scales. This distance becomes horizontal axis of your graph. To add elevation to the profile, simply draw a vertical axis with the range of elevations that you expect for your hike. Wally uses the elevations at the start and end points of hike and at each mile point of the hike to determine his profile. He also checks to ensure that there are no extreme changes in elevation between mile points. The resulting graph provides a good approximation of the elevation changes over the distance of the hike. Coop takes the profile process a step further by recording when a horizontal distance segment crosses an index contour line (a darker contour line that has been labeled with its elevation). Since there can be several index contours crossed in a mile on the trail at Philmont, his profile is a little more refined than Wally's. In either case, the profile provides the crew with an idea of what the trail will be like each day. Remember, at Philmont, it not how long the hike is, but how many peaks do we have today and how steep will be the climb. Be sure to include such additional trail features such as water locations, stream crossings, trail intersections, and staffed and trail camps.

Once you have determined the distance and elevation changes, the navigator should develop a Time Control Plan that predicts how long it will take you to complete your hike (or any portion of it). A good rule of thumb to use is one hour for every two miles traveled plus an hour for every 1,000 foot change in elevation. For example, if your hike is eight miles long, with an elevation change of 2,500 feet, it should take your crew 6.5 hours to walk (8 miles divided by 2 miles per hour plus 2,500 feet change in elevation divided by 1,000 feet per hour). You will probably have to modify this rule based on your crew's capability.

Before hitting the trail the next morning, the navigator should review the route using his profile and map with the entire crew. Taking this time each day is extremely important. It provides the crew with an understanding of how difficult or easy the day will be. Instead of blindly following each other down the trail, they become more of a participant in the trek. It also provides the crew with the information they need to plan out their day. Using the Time Control Plan, the crew (not the advisor) should decide when it needs to get up, when and where (and what) meals should be eaten, when they should arrive at scheduled programs, and when they will arrive at the next day's camp. Finally, it provides an opportunity to reinforce map and compass skills that are little used anywhere else. At each trail intersection, the entire crew should stop and examine the map. The selection of the new trail should be a consensus of all crew members and reviewed with the advisor. If the crew members make a wrong selection, let them live with their mistake until your feet tell you it's time to stop and have them explain where they are. After the first few times that you let them make a mistake, the crew will begin to get serious about terrain awareness.

Philmont sells two different types of maps. The first is a single map sheet (1" = 4000' or 1:48,000) which covers the entire ranch. This map is great for planning your trek and to get a good idea of surrounding terrain features. The second is a set of four map sheets (1:24,000), which covers the northern, central, southern sections and the Valle Vidal area. We use the 1:24,000 scale map on trail because it provides much more detail than the 1:48,000 scale map. The map should be folded and so that the route is clearly visible and held in the hand for frequent checking. The crew leader, his navigator for the day, and the advisor all should carry a map during the hike.

One of the skills that your crew will have to learn is how to compensate for the difference between true north displayed by the grid lines on your map and magnetic north. This difference is known as declination. True north and magnetic north are the same only in a line that runs off the East Coast of Florida, through Lake Michigan, and on up to the Magnetic North Pole located north of Hudson Bay. At Philmont, magnetic north as of 1992 is 10 1/2 degrees east of true north (the map indicates a 1983 declination of 11 1/2 degrees). There are several ways to account for this difference. We strongly recommend that your crew have an orienteering compass, with a built-in declination device, so that your compass and map speak a common language. If you have a regular compass, you can set it to 350 degrees and line it up with the north-south gridlines to orient your map. Another more difficult way is to subtract 10 1/2 degrees from a bearing taken from a map to that set on a compass. "Declination EAST - Compass LEAST".

If you don't have an orienteering compass with its built-in declination device, the simplest method to have your map talk to your compass is to put magnetic-north lines on your map and use them instead of the true-north grid lines. We suggest that you order your Philmont maps ahead of time and do this at home where you will have the right materials that include your Philmont maps, a compass, a yardstick, and a pen. You can use your compass as an accurate protractor. First, turn the compass housing until 10 1/2 degrees (the declination) lines up with the direction of travel arrow on the compass base plate. Set your compass on the map, aligning the north-south lines in the compass housing with the map's north-south grid lines. The long plastic edge of the compass base plate should now point exactly 10 1/2 degrees east. Using a pen, carefully draw the first magnetic north-south line along the length of the compass' plastic base plate. Place your yardstick along this line and continue the line across the length of the map. Continue moving the yardstick and drawing lines until they are parallel magnetic north-south lines spaced evenly across the map. Do not use the magnetic north-south arrow of the declination diagram to draw your magnetic north-south lines as discussed in the Boy Scout Handbook and the Fieldbook. We have found that the angle between the arrows in the declination diagram seldom matches the given declination angle. The U.S. Geological Survey uses a series of standardized diagrams that come closest to the actual declination when adding a diagram to a particular map.

If all of this sounds like Greek to you, you need to take some time to get yourself and your crew more familiar with using a map and compass. There are many fine books on this subject; a good reference is Bjorn Kjellstrom's *Be Expert with Map & Compass*. At Philmont, you will need to have these skills mastered. One of the very first things that your Ranger will ask your crew to do is to orient a Philmont map using a compass, so be prepared.

Water Purification

Philmont typically issues one bottle of Polar Pure for every two crew members to purify their water while on the trail. Philmont instructs crews to put two capfuls of the Polar Pure solution in each quart canteen of water and shake well. Crew members then turn their canteens upside down and let some of the water rinse the top and threads. The Polar Pure bottle is refilled immediately to make sure that it will be ready for use. Remember, it takes an hour before the Polar Pure can be used again. Although Polar Pure instructions state that the water is ready to drink in 20 minutes, Philmont now requires an hour to allow for more contact time. We suggest that you pick up some Polar Pure for use during your crew training before you go to Philmont. **Note:** Some people are sensitive to the amount of iodine that their body can tolerate. Check with your crew and review their medical records to see if any of them have a sensitivity or allergy to iodine. Not liking the taste IS NOT a reason to switch away from Polar Pure.

One way to cut down on the amount of iodine (Polar Pure) on the trail (and the amount of time spent purifying water) is to use "unputrified" water for cooking and wash water. Since you will be boiling the water anyway prior to adding food or washing dishes, it will be purified from the heat and will not require Polar Pure. In Coop's crew, the water bags are ALWAYS filled with "unputrified" water and the canteens contain water that is ALWAYS "putrified". Always separate those canteens that already contain "putrified" water from those that are in the process of being "putrified". If you can't remember which canteens are okay to drink from, you must assume that all canteens are in the process of being "putrified". Coop's crew always puts the Polar Pure bottles with those canteens that are being "putrified". This eliminates any guess work. We also know of crews that have used water filters on the trail. Filters do a great job, but most take at least a minute to a minute and a half to pump one quart of water. Should a filter break down or get clogged on the trail, there is no way to fix it unless you bring your own spare parts. We have used Polar Pure for years and it works for us. Give it a try. A final note on Polar Pure use. The iodine in Polar Pure is an oxidizing agent and will react with the ascorbic acid, sugar, coloring agents, flavoring agents, binders and preservatives found in most powdered drink mixes, reducing the concentration of iodine available to purify the water. Any residue of the drink mix left in a canteen can significantly reduce Polar Pure's purifying capability. We suggest using your canteens for carrying water only and use a two quart plastic container (also known as the Drink Master) to mix all drinks. Use of this container has an additional benefit. Because drink mixes leave a smell, only the drink container needs to be put in the bear bag instead of every canteen that has had a powdered drink mixed in it.

Hiking Baldy

If your crew gets a trek that includes a hike over Baldy, you will probably spend two nights at Miranda, Ute Meadows, Copper Park, Baldy Camp or Ewells Park. From your campsite, you will side hike over Baldy with a commissary pick-up at Baldy Camp. Because of the probability of afternoon storms above treeline, we recommend that your crew get a very early start so they can reach Baldy's summit before noon. That might mean leaving your campsite at first light. Each crew member bring a synthetic long underwear, pants, sweater, 2 quarts of water, and rain gear in addition to their normal hiking clothes. Before leaving Baldy Camp, have your crew leader ensure that each crew member "camel up" and review the proper "lightning position" (catcher squat with hands around the ankles-see the "Weather" section). Pair up your Scouts so that two crew members share a pack carrying their clothes, trail lunch and water up to the top of Baldy. When you return back to Baldy Camp, there should be sufficient room in the packs to handle your commissary refill. The *Guidebook to Adventure* lists a daypack as an optional item for side hikes. Sharing packs eliminates the need to carry extra day packs.

It may be warm enough when you leave camp to begin your hike wearing only a t-shirt and hiking shorts. Depending on the weather conditions, you may find it necessary to stop along the way to add another layer of clothing. You will usually need rain gear or a wind breaker once up on top of Baldy to cut down on your body's heat loss due to wind and lower temperatures. A hint to all crews going over Baldy. Don't miss the meadow just after you come out of the tree line on the eastern approach to Baldy. Too often, crews focus entirely on getting to the top of Baldy and miss this high altitude, open meadow with spectacular views to the west. Both of us walked by this meadow on three different times before we realized it was there. Our crews have been known to take up to an hour just relaxing in the grass before making the final assault on the summit.

Double Dipping

Check your Philmont map to see if your crew will be hiking past or very close to a staffed program camp. If so, try to stop and pick up another program. For example, if your itinerary has you hiking from Crater Lake to Clark's Fork, the crew will be walking by Miner's Park, a rock climbing staffed camp. Have your crew leader and advisor check in at the Staff Cabin and inquire if there is an opening. Depending on the number of crews in camp, they might let your crew rock

climb. On another trek, between Red Hills and Sawmill, Cyphers Mine with its mine tour and foundry is only a mile out of the way (2 miles round trip). Always try and fit in program if you can. The morale is generally lifted anytime the crew gets to do something extra. However, your crew should understand that staffed camps are usually pretty busy and that they may not get a program opportunity when you double dip. If you leave your packs unattended to go to program, always bear bag your food and smellables unless indicated otherwise by a staff member.

Camp Setup

When does camp setup begin? Many crews arrive at a camp tired from hiking and immediately take off their packs and rest. Mean while, the advisor has the urge for a double flusher and starts looking for the toilet paper. The crew can't remember who carried it last or is too tired to look for it. The advisor begins to panic and starts yelling at the Scouts to immediately unload all of their gear. The crew then laughs as the advisor runs to the latrine.

Camp setup begins in the morning with the crew leader reviewing the duty roster with his adult advisor. About a mile from camp, the advisor mentions to the crew leader that he should begin thinking about arriving at camp. When the crew arrives at camp and even before anyone takes their pack off, the crew leader surveys the area and locates the three points of the "Bear-muda" triangle which are the fire circle, the sump, and the bear bag cable (which can be disregarded if it is more than 200 feet away). The dining fly is always set up inside this triangle and tents are pitched outside of it for obvious reasons. All cooking, eating, and clean-up activities are confined to the area inside this triangle. Once the crew leader has established the triangle, he tells the crew their assignments and the order that they will be done. It is absolutely essential that crew duties be done first, before individual tents go up. This may be difficult if the day has been long and the crew (and advisors) are tired.

- a. The crew leader finds the three points of the "Bear-muda" triangle and the crew sets up the dining fly inside of this area.
- b. ALL crew gear, food, canteens, and personal smellables are removed from packs and placed in individual piles next to the fly. The crew quartermaster puts crew gear underneath the fly.
- c. While the crew quartermaster is busy, the rest of the crew puts up the bear bags. In past years, Philmont allowed you to leave your food and smellables on the ground near the tarp until you are ready for bed, as long as you remained in the campsite. However, with the increased bear activity, crews are now required to have bear bags up at all times, except when food is needed for meal preparation. If you have just received a food resupply, you will need the entire crew to hoist the bags up on the cable.
- d. Water containers are filled and may also need to be purified. Water purification takes 1 hour. Often there is confusion as to which water bottles are purified and which ones are not. The water crew must clearly designate which canteens contain purified water and those that are still in the process of purification. Coop's crews always separate the canteens containing the purified and non-purified water and leave the Polar Pure bottles with those canteens in the process of purification.
- e. Crew members set up their tents.
- f. Cook crew and cleanup crew should be aware of their responsibilities as well as time available to ensure that supper is prepared and dishes cleaned before it starts to get dark and the temperature drops.

Rigging a tarp Philmont style is much different than how a patrol tarp is normally set up back home. Philmont issues a 12' by 12' nylon crew tarp with lines and poles. We use crew members' walking sticks instead of Philmont issued poles. Philmont provides no pegs for your tarp, so your crew will have to bring them from home. George Kain uses aluminum gutter nails that weigh next to nothing and can easily be hammered in the hardest ground. A 40' length of parachute cord is placed under the ridge line of the tarp. The cord is pushed through the grommets at each end of the ridge line and tied to a small stick with a lark's head knot. The cord is then tied with a clove hitch to the top of the poles at a height of 4 feet off the ground. This set up reduces the shock on the ridge grommets since the stick will break first in the event of high wind. If the tarp had been placed directly over the pole tips, the grommets could be ripped out of the tarp under stress. A 25' length of parachute cord is laced through the grommets along each side of the tarp and tied to both ends using a tautline hitch. This provides several places where the side edges can be staked down using only one rope per side.

Be sure and set up your tarp 15'-20' away from your fire ring. Also position your tarp so that the prevailing winds will blow through it and not against it. Both Coop and Wally have taken this technique home to our troops. We have yet to

have a tarp become damaged or go down in a storm when set up in this manner. A final note on the crew tarp. Avoid tying the ridgeline to trees. If each crew tied their tarp to a tree, the tree bark could be damaged ultimately causing the tree to die. If you must tie a line to a tree (either tarp or clothesline), make sure to put a bandanna around the tree first to protect the bark.

One of the best ways we have found to keep order in the camp setup process is through the use of a duty roster. Maintained by the crew leader and rotated each day, the duty roster lists the jobs to be performed each day by crew members. Jobs include cooks, cleanup, water collection and purification, and "naviguesser". In 1996, Derek Toms, Wally's Ranger, suggested including a trash compactor to the duty roster. Philmont is really stressing trash compaction and staffed camps will not accept crew trash that has not been thoroughly compacted. We have found that when your crew leader makes up the duty roster, it is best not to have tentmates working together on the same job. By placing tentmates on separate jobs, the crew gets to know one another a little better thereby improving crew dynamics. In addition, it helps speed up getting out of camp in the morning because there is at least one tentmate who is not working and is available to help pack up the entire tent's gear.

Another technique in the camp setup process that works is the assignment of crew gear to individual crew members. After a day or two on the trail, everyone knows who is carrying the shovel and toilet paper! Assignment of crew gear also helps when leaving camp to ensure that nothing gets left behind.

Despite both these measures, we have found that crews may have to be reminded that crew duties always come first. As Bob Klein says, "Everything is everybody's job. The crew comes first!" Depending on the maturity and experience of your crew, individual members may neglect their responsibilities when they are tired, wet or cold. It is the responsibility of the crew leader to keep the crew functioning, despite the conditions.

Cooking

Although Philmont has both 6-quart billy pots and 8-quart cooking pots available for issue, we recommend bringing your own. You never know what condition Philmont's pots are in and some may be in pretty rough shape after having been used so often. If you don't bring your own pots, don't use Philmont's 8-quart pots. We have found that backpacking stoves are geared for much smaller pots. At campsites where it is cold and windy (Ute Meadows, Miranda, Copper Park, Ewells Park, Comanche Peak, Mt. Phillips, and others), it seems to take an eternity to boil water because of the 8-quart pot's large surface area that is exposed to the cold that acts as a radiator. If you use Philmont's 6-quart billy pot, it may be a lot quicker if you boil the water in two 4-quart pots first and then mix the food in the 6-quart. Wind screens can help, however much less fuel is consumed if two stoves are used with the smaller 4-quart pots with tightly fitting lids.

Both Wally and Coop use 4-quart pots only. We have found that most four person supper packs require a quart of water to rehydrate the contents. A 4-quart pot will just barely handle two 4-man supper packs. If you have more food, you may want to split your supper packs, so that you are cooking in two 4-quart pots, a more manageable situation.

Cooking isn't complicated. If you can boil water, you can make a great tasting supper. There are only four rules:

- a. Cooks **must** wash their hands before handling any food. We recommend bringing anti-bacterial soap or wipes for the cooks. Remember, cooks must wear closed toe shoes.
- b. Read preparation instructions **TWICE** before starting to cook. There is a big difference to "*add contents to boiling water and simmer*" as compared to "*add water to contents and bring to a boil*".
- c. **Never** light the stove until the pot with water is ready to be placed upon the stove.
- d. Always measure the water to be heated so that no excess water is heated, thus wasting fuel. Be sure not to measure by removing water from a "supposedly" known quantity in the pot. You'll probably be wrong and wind up with a watery main dish.
- e. Never simmer food on a stove. The water will retain its heat long enough to rehydrate the food and trying to mix food in an 8-quart pot on a hot stove can be dangerous.

Philmont food is not as bad as most make it out to be. In fact, Philmont food is excellent compared to other backpacking camps that we have attended. There are two types of breakfasts at Philmont. The first is the no-cook breakfast that

contains dry cereal or food bars such as the famed pemmican bar (better known as barf bars or adobe bricks). Philmont does not provide powdered milk for dry cereal. If you have members in your crew that can't handle dry cereal alone, you will have to bring your own powdered milk from home. No-cook breakfasts are great because a crew can leave camp quickly because there is no clean-up and you can eat while walking on the trail. The second type of breakfast is the boiled water breakfast, such as oatmeal. This breakfast is pretty easy and the crew can clear camp fairly quickly because it is unnecessary to formally wash dishes. Crew members can add water, rub out their bowls using a finger that is assumed to be clean, and just drink the leftover soup (more about "auto-sumping" in the Dishwashing section).

Philmont has three types of lunches, all of which are no-cook. Three lunches are squeeze cheese, four lunches are meat spreadables (tuna, ham, chicken and turkey), and three lunches are peanut butter, jelly, and crackers. In 1999, Philmont began phasing out the old spreadables and replacing them with a different brand that were better liked by the crews we talked to.

All suppers must be cooked. Philmont Rangers recommend that only one pot be used for all ingredients. We have found that you may want to add your dehydrated vegetables or rice soups to the water first to allow them to fully cook and soften. This avoids crunchy green beans or rice. We have found the soups contained a lot of salt. In cold, wet weather, a pot of soup in the afternoon before supper makes a great pick-me-up. The soup can also be added to the supper entree to spice up the flavor. Don't add any extra water for the soup or you will be drinking your supper. Philmont suppers are as follows:

- Macaroni and Cheese - Lasagna
- Beef Stroganoff - Turkey and Noodles
- Red Beans and Rice - Chicken and Rice
- Beef and Mashed Potatoes - Beef Stew
- Spaghetti - Chicken and Noodles

Seasonings can really "spice up" the suppers. Philmont only provides small containers of salt and pepper. Once opened, they are almost impossible to reseal and leak over everything. We recommend leaving Philmont's spices at base camp and bringing your own. Dehydrated food tastes much better when you add some of your own spices. Wally's wife Mary has created her own seasoning that was really a big hit with his crew. She combined two parts of McCormick's seasoned salt with one part of McCormick's seasoned pepper. Most suppers can be improved with just this mixture. Wally's son Wes added lemon pepper to most dehydrated vegetables for additional flavor. A small bottle of Tabasco Sauce doesn't weigh much and works well, especially at the chuck wagon supper. Coop usually brings along oregano, basil and garlic powder for spaghetti and lasagna. He has also become a big fan of Mary's seasoning. Joe Flaig always brings his dried peppers, which can definitely add a zing to any meal!

The breakfast drink made with hot water is a great pick-me-up for cold mornings. A final note for adults. At the advisor's meeting during your first night at Philmont, be sure and pick up enough coffee supplies to last the ten days on the trail. In 1986 and 1994 (you thought he would have learned), Coop ran out and he and his other advisors went through caffeine withdrawal until they ran into another crew with extra coffee.

Food is packaged in packets for both 2 and 4 people. A 7 - 8 man crew will receive two 4-man food packets per meal; a 9 - 10 man crew will receive two 4-man food packets and one 2-man food packets per meal. The amount of food provided is usually more than enough to satisfy a crew. However, crews made up extensively of older Scouts or on longer treks may find themselves renotching their belts. You can augment or modify your food supply by using the "Swap-box" which is located at each commissary and at some staffed camps. "Swap-boxes" allow you to trade in your own unwanted food items for more desirable items that may be in the box.

Commissaries are resupply depots located at various points along each trek. They provide restocking of food, fuel (a separate purchase), all purpose (AP) paper (better known in the civilized world as toilet paper), trash bags, and Dutch oven supplies. Depending on your trek, commissary pickups will vary anywhere for 1 1/2 to 4 1/2 days apart. Normal hours of operation are 8 am - noon and 1 pm - 5 pm, but they may open up early or stay open late if you have special requirements. The crew leader and two to three Scouts should make commissary pickups. The commissary staff is usually very busy and will not be pleased when the entire crew, with backpacks on, comes up to the issue window. The

crew leader must bring "Your Life" with him since this lets the commissary staff know what food items are needed. The crew leader should also prepare a want list of the additional crew items. Don't forget to bring your empty fuel bottles and fuel filter.

The crew leader should always count the food packets upon receipt. You can also ask the commissary staff for some additional goodies like canned peaches or materials to make a cobbler! Finally, commissaries will also have a small adjoining trading post offering batteries, film (caution: they do not carry all types), postcards, stamps (sometimes), junk food and a limited assortment of replacement gear. Trading posts are also mail drops.

One final word on food. If you have a picky eater in your crew, now is the time for him to get over it. He will need all the calories he can get by the food provided by Philmont to keep his energy level up on the trail. If he can't eat trail food on the shakedown, perhaps he ought to rethink his Philmont decision. You can't have this crew member lagging behind or getting cold because he refuses to eat what is given him at Philmont.

Dishwashing

Philmont's backcountry dishwashing procedures have fluctuated over the last several years, ranging from a simple wipe out of your cup and leave it by the sump to a full blown three pot wash with a chlorine sanitizer dunk at the end. In 1996, Philmont began using two pot method; a wash pot with a little biodegradable soap and a boiling hot water pot to sterilize after the wash. They also require **sterilizing your dishes BEFORE the supper meal** to handle any bacteria that might have built up while carrying the pots and utensils in your pack during the day.

The extent of dishwashing really depends on the type of meal that you are eating. No cook breakfasts and lunches are simply eat and go affairs. Boiled water breakfasts usually involve a hot cereal and a drink, both of which can be mixed in a crew member's cup, avoiding getting any crew gear dirty. When a boiled water breakfast is over, any oatmeal or cereal particles can be removed from your cup by simply adding hot water or other drink and consuming the result before dipping the cup in the remaining hot water and hitting the trail. The only meal that really requires organized dishwashing is supper.

The first step in this dishwashing process occurs immediately before the start of each supper meal when the cook crew announces that water is boiling in the first cooking pot for supper. Each crew member drops what they are doing and heads to the fire ring to sterilize their individual cups and spoons. Personal dishes and crew utensils must be completely submerged in a rolling boil for 30 seconds. The second step is to eat everything – use the "gut sump". What you cook and can't eat must be carried out. The third step is to "spatulate" the pots as soon as they become empty. Coop's crews use small rubber or plastic scrapers that can be bought in any grocery store to "spatulate". Don't wait until after supper when the food has hardened in the pots! Don't worry. If you have a great meal and a hungry crew, they will be fighting over the privilege of "spatulating" the pots, especially dessert pots. The fourth step is for the cooks to heat a pot of water as soon as a stove becomes available, so that hot water will be ready for dishwashing at the end of the meal. At the end of a meal, crew members should drink bug juice from their cups (better known as "auto sumping") to dislodge the remaining food particles or "cling-ons" from the walls of the cup. After the drink is consumed, there should be almost no food particles left in the cup. The scraper can be used, if necessary, to wipe out any remaining food particles. All "scrapeage", either from personal or crew gear is placed in a Ziploc bag for wet trash, better known in trail lingo as the "yum-yum" bag. The idea is to get the personal and crew gear as clean as possible before washing and rinsing them.

You will need two pots for washing dishes. Choose the cleanest "spatulated" pot as your wash pot. Pour a quart of hot water into the wash pot from the pot that you have used to sterilize your dishes before supper. Add enough cold water so you can just get your hands in the wash water. Now you can add 3-5 drops of Camp Suds (Wally does, Coop does not) to the wash pot. Do not add more, since excess soap can cause stomach problems and diarrhea. The second pot with the remaining boiling hot water becomes your sterilizing rinse pot. Each crew member washes his or her own personal gear in the first pot. Philmont provides a nylon scrubbie that can be used. Dishes are then sterilized in the hot rinse water. One of the clean up crew can hold a nylon mesh dish bag to air dry individual and crew gear. The bag also serves as a means to stow the gear up and off the ground over night. Some Philmont crews have used a 3 x 3 foot plastic sheet or a bear bag placed on the ground to dry individual and crew gear. However, we have found that ground drying risks getting the gear dirty again if your crew is not careful walking around the clean up area. After individual gear is finished, the crew's cooking pots and utensils are done. Pour the soapy water into the pots one at a time and clean them thoroughly. Then pour in the hot water to rinse out any soap residue. Crew pots and utensils can also be air dried using the nylon mesh bag. When all personal and crew dishes are done, they are placed around the sump, where the smells are the greatest.

Your crew must work quickly because if the water gets cold, it will not cut the grease. Each crew member should take no more than a minute to wipe, wash and rinse his cup and spoon. We strongly encourage that one advisor be assigned to watch all dishwashing efforts to maintain the highest level of sanitation possible. Short cuts usually end up with bacteria forming on dirty gear. In addition, any food smell left on dirty dishes can attract animals. If the cleaning water cools, the crew will have to reheat the water and start the process over again. This is especially difficult after a long day on the trail or when cold, darkness or wet weather has set in. However, the crew should know that if the advisor says a dish is not clean, then it gets redone, no questions asked.

The final task for the clean up crew is disposing of the wash water. Pour the soapy water from the wash pot through your frisbee strainer and into the sump near your campsite. Now pour the hot water from the sterilizing rinse pot into the wash pot. Rinse out the wash pot, getting any food particles or soap film. Pour the remaining water through the frisbee strainer and into the sump. Make sure you rinse out the plastic scrubbie with the hot water because leftover food can lead to diarrhea on the trail. The last step is to clean the frisbee and the top of the sump of any food particles and place them in the "yum-yum" bag. When cleaning the screen on the sump, it should be scraped with a pine cone to add a natural pine scent instead of a food smell that could attract animals. In 1999, some Rangers were testing the use of a 16" by 16" plastic window screen folded twice (1/4 size-4 layers) that could be placed over the sump screen instead of using the frisbee. Once the water was poured through, the screen was placed in the "yum-yum" bag and snapped with a finger to loosen the food particles.

The "scrapeage" in the "yum-yum" bag along with the boxes, foil and plastic food pouches must be disposed of. At Philmont, you are not allowed to burn, bury or discard trash in the latrines because the animals will simply find it. At the end of each meal, compact the trash as much as possible and seal it tight. And we really mean compact. Staffed camps and commissaries will normally not accept trash that has not been really well compacted. One or at most two cereal or cracker boxes should contain all the trash for a meal for the whole crew. This is the job of the crew "trash compactor". Boxes should be torn in small pieces, spreadable cans crushed as much as possible, and foil wrappers and bags carefully folded and inserted into the box or bag. Trash should always be doubled or triple bagged and treated as a "smellable" (more on that later). Coop's crews use duct tape to seal the trash and keep it compacted. Of course, this can lead to impromptu trash football or soccer games with the finished product. Keep each meal's trash package separate and small. When you arrive at a staffed camp or commissary, always ask the staff what they want done with the trash. In most cases, they will take it if it has been compacted and is double bagged. If the trash has not been compacted well enough, your crew may wind carrying in out!! If you are at a trail camp and must keep trash at your campsite overnight, your trash bag should be placed at the top of your bear bag (more on this in the next section).

Bears and Bear Bags

The bear population at Philmont is still essentially wild, and must be treated with the utmost respect not only for your health and safety, but also for the bear's. Bear raids at Philmont are much less common now than in past years, despite the fact that there are more than 125 bears or 1 per every two square miles on Philmont property according to a recent census. This success story is the result of a three part attack on the problem by the Philmont staff. First, the availability of food has been sharply curtailed by the installation of stainless steel bear bag cables at all campsites providing reliable and bear-inaccessible hang points for bear bags. Second, a policy of harassment has been instituted to increase the bear's natural wariness of humans. Any bear that approaches a staffed camp in daylight is vigorously pursued by staff Rangers. Treed bears are tagged and radio collared. Third, problem bears or those bears that have successfully and repeatedly raided camps are captured and removed to the Rocky Mountain National Park, over 250 miles away.

Clearly, your crew's major responsibility towards bears lies in making sure that you never create or encourage problem bears. It is important to recognize that bears are intelligent, tenacious, and stubborn. Once a bear gets into a food cache, they reorient their entire lifestyle towards raiding. At Philmont, "if you feed a bear, you kill a bear". It is critical to avoid providing food to a bear, not just because of the inconvenience to your crew, but also because you are helping to create the most dangerous kind of bear, one that has become both dependent on and overly familiar with human beings. After tasting food, these bears never change their raiding habits and may have to be killed. Your crew should know that in New Mexico, providing food to a bear that has to be destroyed could result in a fine up to \$500.00.

A couple of points to remember. Always maintain food security and personal and campsite cleanliness. Eat only around the fire ring area and pick up all spilled food. Mix your drinks in a separate container that can be stored in the bear bag. Be sure and change into your sleep clothes before going to bed so that no food smells will be brought into the tent. ***Never get anywhere near a sow and her cub. This may be the single most dangerous situation involving bears.*** Never shine a

flashlight or use a flash camera on a bear at night. Persistent bears in camp can usually be chased away by shouting and banging pots and pans together. Do not use a whistle or throw anything at a bear. Never try to chase after a bear if it has already gotten your food. It is not worth the risk; the Philmont staff can always replace your food. Notify a Ranger of all bear sightings or bear raids. Any information on approximate size, coloration or tag number (if any) will be useful in keeping track of problem bears.

Bear bags are just what the name implies; large sacks in which you place all your smellables that are hung high to keep them inaccessible to bears and other animals. Smellables include food, trash, "Drink Master", sun screen, toilet paper from home, toothpaste, film, bandaids, moleskin, foot powder, and anything else that has any kind of smell. What is leftover is pretty much clothes, sleeping gear, and water. Up until a few years ago, hanging bear bags involved throwing a rope over a limb and hoisting the bag up as high as possible. As one might imagine, the results were often hit-or-miss, and the bears had a field day with the many bags that were either hung too low or too close the trees. Some of the truly hilarious tall tales involving bears recounted their magical abilities to get bear bags. The Kamikaze Bear was known to climb to the top of the nearest tree and dive down onto the bear bag. The First Class Bear, with his knowledge of all Scout knots, was able to untie any bear bag rope.

Today, at each staffed and trail camp, there is a designated bear bag site, with a stainless steel cable suspended between two trees. The cables are hung about 20 to 30 feet off the ground and have several chocks to prevent the rope from sliding to within reach of the trees. The hanging process is simple. Double the bear bag rope and tie Figure Eight knot with a loop at the mid point. Wrap several turns of the rope around this knot to help weight it and toss it over the cable between the chocks. Don't use rocks to weight the rope. If the rock should come off in the throwing process, you now have an unguided missile flying around in the bear bag area. If it stays on, it will swing back and wrap itself around the bear cable or swing back and hit the guy holding the rope. In either case, you have problems. Tie your bear bags on rope near the mid point with a lark's head knot. We then tie a small pulley with a light nylon line to the Figure Eight knot for our personal smellables ("Wait A Minute") bag. Using a pulley allows us to raise and lower the personal smellables bag without having to drop the remainder of the bear bags, which can be a real chore. There will always be someone who forgets something that needs to be placed in the personal smellables bag, hence the term "Wait A Minute". Be sure to put the crew first aid kit and any medications in the "Wait A Minute" bag so they can be retrieved quickly. To get all the bear bags up usually takes the entire crew, especially if you have recently made a commissary stop. Once the bags are up, tie the free ends of the bear bag rope to two different trees, thereby avoiding loosing your food should a bear cut one end.

Philmont now provides woven polyethylene bear bags. If you want to use these same bags on your shakedown hikes, most large agriculture feed stores will sell to you or may simply give them away if you explain that you need them for Scouts. Bear bags must be hung up as part of the camp setup process to prevent chipmunks (better known as mini-bears) from getting to your food. Having your bear bags up early also ensures that your crew will have food, should a bear come through your campsite.

In 1999, because of the frequent bear sightings at Uracca Mesa and Clark's Fork, the camp staff there conducted late night inspections of each campsite and would wake up the crew leader (and everyone else at the site in the process) if any "smellables" were found outside of the bear bags.

Personal Hygiene

Most crew members will smell in the back country. Some crew members will really smell in the back country! While there are showers at staffed camps, most are solar powered and are generally not available to crew members during periods of rain. It is still important that your crew bathe each day after they set up camp. In discussing personal hygiene, your Ranger may refer to P.T.A. as the three parts of your body that should be washed each day. P stands for your pits or underarms. For the sake of decorum, we will refer to T and A only as your chest and backside, respectively.

When your crew members wash, please don't let them bathe in streams or near cattle troughs. Someone downstream will wind up using your bath water for drinking and the cows don't like it when the water tastes like soap. The bottom of a plastic gallon milk container or bleach container makes a great wash basin. Philmont requires that all bathing be done at the sump. However, most sumps are in the open and visible to all. Each year, more women come to Philmont, so it may be difficult to find enough privacy for a bath.

Always use unscented biodegradable soap like Camp Suds for washing. One of Coop's 1996 crew brought along a mint scented biodegradable soap. After its first use, that crew member and his clothes smelled like a peppermint stick, a bear's favorite candy. Needless to say that was the last time that soap was used. Remember not to use soap after 5 pm (4 pm is

even better), since the scent may remain by the time you go to sleep. If you come into camp late, just rinse off your body salt with water without using any soap. Finally, there is **no need for deodorant** on the trail. It is just another smell that will attract bears. Just understand that everyone is going to stink, even if you bathe every day. After a while, you will get used to it.

Some crew members may develop "hiker's rash" between the legs and even under their arms. It feels like diaper rash and no one wants to talk about it. The rash usually develops around day three. It comes from not washing and wearing dirty underwear and cotton hiking shorts and t-shirts that absorb sweat and body salt. The salt dries on the clothing and irritates the skin. Our crews don't wear underwear or cotton hiking shorts. We wear nylon blend hiking shorts with a nylon brief because they are easy to keep clean and dry out quickly. Some crew members, especially the adults, may find that the combination of the change in diet, amount of water consumed, and heavy exercise can produce diarrhea. A few packaged towelettes can provide some relief.

We also insist that our crews wash their socks, especially the liners, each day. Believe it or not, your feet have more sweat glands than any other part of your body. Washing your socks will ensure that there will always be a clean set available to wear. Clean socks and feet also help reduce the possibility of blisters. Keeping feet clean can also reduce the possibility of athlete's foot. Use medicated foot powder or an anti-fungal treatment such as tolnaftate (Ting) or miconazole (Lotrimin spray) should symptoms occur. Our crews wash their clothes and themselves immediately after they set up camp. If your hiking shorts and shirt are moist when you take them off the clothes line the next morning, don't worry. They will dry out very rapidly while you are hiking. Damp socks can be pinned to your backpack to dry out as you walk to your next campsite.

Keeping yourself and your clothes clean can be a little more of a problem in rainy weather. Clothes don't dry out as fast and often have to be put back on damp. If your socks are just damp and you have a synthetic sleeping bag, you can wear them to bed at night and they will be dry in the morning. Don't try this with a down sleeping bag. Taking a bath with your bandanna can be a bit chilly because the air is cooler. But just taking the effort to good hygiene pays off in helping promote a positive attitude. You just "feel better".

Scout Skills

We have found that older Scouts can be pretty rusty on their basic Scout skills. One skill that is particularly important on the trail is fire building. Although gas stoves have replaced the need for building fires for cooking, inclement weather may require that a fire be built for warmth. On one of Wally's previous treks after a particularly cold and rainy day, it took hours for his crew to finally build a fire. Work with your crew and review methods for building a fire under wet and windy conditions. If you do build a fire, Philmont wants you to keep them small, using downed sticks of 1" or less in diameter. Allow your fire to burn out rather than pouring water on it. Before breaking camp, gather up the cold ashes into a plastic bag and scatter them well away from the camp.

For camp set up, crew members should know four basic knots. The tautline hitch, lark's head and clove hitch are important for setting up the dining fly. The two half hitches is best employed for a clothes line. The lark's head is also used for hanging bear bags.

First Aid

Like any summer camp, you will be exposed to your everyday first aid situations like cuts, burns, and scrapes. However because of Philmont's high altitude, low humidity, and extended miles on the trail, you can expect to see some wilderness first aid situations that you probably have not seen before. The best treatment is always prevention. Each year, some Scout will not make his trek because he gets injured fooling around before he arrives at Philmont or while at base camp waiting to go out. A quick game of Frisbee is not worth missing the ten days on the trail! Campsites are also areas where Scouts can get hurt. Never let your crew walk around in socks or bare feet. Make sure that your cooks take proper precautions when using back pack stoves. Crew members should be reminded to always stay out of the fire circle when food is being cooked.

There are several wilderness first aid situations that may occur while you are on the trail. The daily rainfall and cool temperatures at higher altitudes provide all the ingredients needed for hypothermia. Left untreated, hypothermia can cause death. Hypothermia is caused by a cooling of the body's core temperature. Although moisture takes away body heat rapidly, it is not required to make a person hypothermic. Lack of food, overexertion, cold, rain, wind, sweating, and exhaustion may all be a factor. Usually, the person who is becoming hypothermic will not be aware that he is being

affected. Therefore, all crew members must be able to recognize the symptoms and watch out for each other. Shivering is a signal that a person is becoming hypothermic. If a crew member should begin shiver, immediately take steps to increase the body's core temperature. If you are on the trail, have him put on another layer of clothes or raingear, and pick up the pace. If in camp, have him head for his tent. If the shivering becomes uncontrollable, it is a sign that the body has lost its capability to generate heat. At this point, you have a potential medical emergency on your hands. Simply adding clothes or finding shelter simply will not help. You must provide the needed heat to raise the body's core temperature. Remove the crew member's wet clothes and put him under a fly or inside a tent in a dry sleeping bag to generate warmth. You may have to put a second crew member in the sleeping bag with him. Give the affected crew member warm food and liquids. If he does not respond or becomes unconscious, send for help. Again, prevention is the best cure. When it starts to rain, put on rain gear immediately. Eat plenty of food. Layer your clothes to avoid overheating. Make sure crew members put on their knit hats and wool sweaters. When one person gets hypothermia, everyone in the crew should be treated for it.

Unless you have hiked in high elevations before, Philmont may be your first exposure to altitude sickness. The reduced oxygen content in the air affects each crew member differently. Your biggest and strongest Scout may be the one who is affected while your "willow" walks down the trail with no problem at all. In 1986, one of Coop's better hikers came down with altitude sickness after the crew had climbed above 10,000 feet for the first time. He complained of an almost blinding headache and nausea. We put him in his tent, fed him Advil and soup for the remainder of the day. After a good night's sleep, he was ready to go again in the morning and was not affected again. Sometimes, crew members do not recover quite so well and must be brought down to lower altitudes.

Dehydration can be a problem because of Philmont's low humidity. In the East, when we exercise and it is hot, we sweat and get thirsty. At Philmont, although we may be exercising just as strenuously, the sweat evaporates without leaving much moisture on the skin. We may be losing even more of our body's fluids and not even begin to feel thirsty. Before leaving camp in the morning, have your crew members stand in a circle with your crew leader in the center and drink at least a half a quart of water (by the end of trek, crew members should be able to down a complete quart of water without batting an eye.) This ritual is known affectionately by the crew as "cameling up". Most crew members don't like drinking that much water, so that is why your crew leader stands in the middle and watches. Another way to monitor fluid intake of your crew is noting whether they are urinating regularly. If they have to stop and take a leak, chances are they are drinking enough. A quick self-check for your own water intake is to note the color of your urine. If it is clear, you are drinking enough. If it is dark yellow, you need more water. Finally, be sure and fill your crew fill their canteens at every water source. If you having been exercising hard before the water stop, camel up again.

We have seen more crews using Platypus hydration systems on the trail at Philmont. Although the Platypus offers the convenience of being able to take a drink through the drinking tube without having to take off your pack, Wally and I are not big fans of it for several reasons. When you drink from a Platypus, you sip through the drinking tube. It is really hard for an advisor to tell if a crew member is really drinking enough, unless you are aware of who is urinating and who is not. Wally knows of one crew this past summer, where a crew member became dehydrated even though he was using a Platypus, because he was not drinking enough and his advisor was not aware of his fluid intake. Personally, we like taking a water break, whether it be a short "packs on" break or a longer "packs off" break and taking a good slug of water. During the break, you can quickly assess by looking at the water level in each canteen, to see how much water each person has consumed. In addition, most packs have external pockets that provide easy access to a canteen if you need a drink while you are walking.

The dry humidity and high altitude can also be a factor in causing nosebleeds. The lining of the nose simply gets dried out causing a surface rupture of the small blood vessels. If you have a crew member who has experienced nosebleeds in the past, he can increase the moisture level of his nose by putting a light coat of petroleum jelly or Carmex in each nostril. If a crew member should get a nosebleed, have him stop whatever activity he is doing and sit down. He should gently pinch the nostrils together while tilting his head forward. If bleeding persists, he should be taken to a staffed camp for additional medical treatment. Nosebleeds can also be caused by dehydration. Make sure that your crew stays fully hydrated.

As was mentioned earlier, diarrhea can be a problem for some crew members. After a day or two on the trail, the body adjusts and other than being an inconvenience, it usually goes away. However, should it persist, diarrhea can cause substantial dehydration leading to serious complications. If one of your crew has a problem with diarrhea, stop by a staffed camp early in the situation for some medical assistance.

Dehydration, altitude sickness, and heat exhaustion all produce the same symptoms: fatigue, nausea, and headaches. At

Philmont, it is likely that someone with these symptoms has a touch of all three, so treat for all three: drink more, breathe deeply, and slow the pace. At Philmont, you should be drinking up to 8 quarts a day (almost a quart an hour while on the trail) depending on the weather conditions and the amount of strenuous activity that you are undertaking. The body's reaction to less oxygen in the air due to altitude is to breathe more often, but this automatic compensation may not be enough. Teach your crew members rhythmic or power breathing, forcing the air out of the lungs on their rest step, so that they will breathe deeply and more often. Finally, to avoid heat exhaustion, hike early in the day with its cooler morning temperatures and hike at a pace that everyone can handle.

You will find that the most common injuries that you will have to treat are simple cuts and blistered feet. Cuts should be cleaned in soap and water (it is amazing how dirty you will get), cleansed with an antiseptic wipe, treated with antibiotic ointment and covered with a bandaid. Blisters are another story. The best treatment is prevention. This process begins during your shakedown hikes when the crew's boots and socks are checked out. Crew members should know where their boots will rub their feet and put on moleskin BEFORE they hit the trail. Additionally, crew members should know that it is **their right and responsibility** to stop the crew while hiking if they begin to develop a foot problem. It is much easier to re-tie a boot or apply moleskin than to treat a full-blown blister. Remember, if someone develops a foot problem, the whole crew will be affected.

Teach your crew how to take care of their feet. Washing their socks each day is a good place to start. Crew members should carry their own hot spot kits and know how to put on moleskin. There is only one rule when it comes to moleskin; more is better. Crew members will usually use only enough moleskin to cover the affected area. This is ineffective since it will not provide enough surface area to ensure that the moleskin will stay on and the blister will generally increase in size. If a crew member begins to develop a hot spot, stop, remove the socks and powder the feet. Keeping the feet dry will help reduce the chance that a hot spot will develop into a blister. Next, use tincture of benzoine to coat the affected area. Tincture of benzoine will toughen the skin and add to the sticking capability of the moleskin. Coop has also found that duct tape does a great job holding moleskin in place and it can be applied to the inside of the boot to reduce friction. Finally cover the area with a moleskin patch. The patch should have rounded corners to reduce the chances of it coming off when putting on socks. You will need a small set of scissors to cut moleskin effectively. If the skin appears loose around the hot spot, make a moleskin donut by cutting a hole the size of the affected area and place it on the foot. If a full blister has developed, use a molefoam donut instead of moleskin. Unless the blister is extremely painful making it difficult to walk, it is generally best not to drain it. The fluid inside the blister acts as a lubricant and helps improve the healing process. Draining it creates a non-sterile open wound that must be treated.

In 1997, Mimi tried something new. Instead of "pretreating" potential hot spots with moleskin, she painted those areas with Second Skin. This pretreatment worked like a charm and did not leave any sticky residue on her socks like moleskin and tincture of benzoine can. She reapplied New Skin each morning before putting on her socks. Coop now carries Second Skin in his crew's first aid kit. Again, the best treatment is prevention.

Each crew should have its own first aid kit that is normally carried by an advisor. Much like stoves and packs, the contents of a first aid kit are left up to personal preference of the crew advisor. However all first aid kits should contain the basics such as bandaids, gauze, adhesive tape, an Ace bandage for sprains, and triple antibiotic ointment, such as Mycitracin or Neosporin to handle every day problems such as cuts, scrapes, blisters, and burns. Advisors should note that they are **NOT ALLOWED** to give medication orally to any non adult crew member, unless they have been given written permission ahead of time. This includes pain relievers and fever medications such as Advil, Aleve, Nuprin or Motrin; Imodium AD for diarrhea; and antihistamines such as Benadryl for treating colds and allergies. A more complete first aid kit list is contained in Annex F.

In the unlikely event that you that you will be faced with a first aid situation that requires more skill or resources than you possess, don't worry. Philmont is fully prepared to handle any situation. Each staffed camp and each vehicle traveling in the backcountry is equipped with a radio that can be patched into the health lodge at base camp. During your Ranger training, your crew leader will be instructed to permanently mark on the back of one of your maps the information that the health lodge will need to know to properly evaluate your specific first aid situation. Simply fill in the blanks, send four crew members to the nearest staffed camp and keep your patient comfortable. Help will soon be on the way.

Women at Philmont

Every year more and more women come to Philmont, usually as part of a co-ed crew or a Rayado Crew. This trend is reflected in the growing number of female Rangers that prepare crews for the backcountry. Even though you may not be a co-ed crew, you could be assigned a female Ranger. Woman have clearly established that they are as capable of

handling the same strenuous Philmont conditions as their male counterparts.

With the increase of women at Philmont has also come a down side in the form of blatant sexual harassment of female staff members and co-ed crew members by male crew members and their male advisors. In 1994, a crew almost lost its chance to earn their Philmont arrowhead patches when one of the crew members made a sexually explicit remark to the female staff member responsible for monitoring the crew's conservation project. After a lengthy discussion and an apology, the crew was allowed to continue their work and ultimately received their patches. That same year, another all male crew was assigned a very attractive female Ranger. The crew members immediately began to talk about what they were going to do to their Ranger after it got dark, loud enough so that the Ranger could hear exactly what was being said. When the advisors did nothing to stop this discussion and acted as if "boys will be boys", the Ranger reported the incident to the Chief Ranger. As a result, the council involved received written notification from Philmont that these advisors would not be allowed to return to Philmont again. Perhaps this behavior is a result of too many years of single sex camping or an outright opposition by some Scouts and adults to females participating in Scouting's high adventure program. Whatever the reason, it is still wrong. Advisors should tell crews, that he or she expects them to live by the Scout Oath and Law while on the trail. That means **all** people, regardless of sex, race or religion should be treated with the same level of respect and dignity, whether in base camp or on the trail. We applaud those young women who come to Philmont either as staff members or as crew members because they add a unique dimension to the overall experience. It is time for all of us to get beyond the single sex issue and focus on what can be learned from one another while on the trail at Philmont. And guys, be careful about how macho you become while on the trail. There are some women out there that can hike you into the dirt without even getting winded and not even look back.

Co-ed Crews

If you are an advisor to a co-ed crew, you need to be comfortable discussing women's issues. Some advisors may feel that it is just not their place to discuss topics such as menstruation with both male and female crew members. This is simply not the case. Right from the very start, advisors need to be frank and honest with their crew members and provide any information that will make the trek more successful. Open communication with the entire crew will help to encourage better understanding and cooperation among its members.

The stress of hiking in the backcountry may induce or delay a woman's menstrual cycle or it may have no effect at all. Therefore it is important to know how to deal with it under wilderness conditions. Each female crew member, despite the timing of her last period, should carry a supply of sanitary products in a waterproof container inside of her pack. A smaller container, such as a Ziploc bag, can be used for daily needs and should be kept handy in a pack's outside pocket. When the crew arrives at its camp for the night, the daily container can be resupplied and the used products can be removed and stored in the waterproof container. Sanitary products (both used and unused) must be placed in the bear bag at night. In the *NOLS Wilderness Guide*, it is recommended that woman bring along small Ziploc bags for the storage of used tampons and pads. They have also found that placing several crushed aspirins in the Ziploc bag can help eliminate the problem of odor. Outward Bound recommends storing used sanitary products in a Ziploc bag with dry tea bags to absorb the odor. Used sanitary products should only be discarded in a trash facility at a staffed camp or at a commissary. Used products must never be placed in latrines or buried in the backcountry. In 1997, Mimi reported that some staffed camps in the backcountry maintained an emergency supply of sanitary products.

Hiking at Philmont is tough but it can be made even more difficult with cramping. Advisors need to be aware that women can experience cramping between menstrual periods. The pain can occur on either side of the abdomen or lower back. Women who regularly experience cramping are familiar with its symptoms and are better able to cope with the associated pain. Cramping usually goes away within 36 hours. Sometimes when cramping occurs on the right side it can be mistaken for appendicitis. However, with appendicitis, other symptoms including low grade fever, diarrhea, and vomiting are present. Cramping has none of these symptoms. If a female crew member experiences severe cramping, it may be necessary to hike at a slower pace or even off load some crew and personal gear. While this situation did not come up with Wally's 1990 co-ed crew, he had discussed the situation with his entire crew. While they were not happy with the idea of increasing their personal loads, they at least understood that it was a possibility.

Cotton hiking shorts and underwear promote an environment that can cause several unpleasant and debilitating medical conditions for female hikers, such as candidiasis and urinary tract infection (UTI). Because of this, some women may prefer to hike in nylon blend hiking shorts with a built-in nylon brief, as earlier in the guide. Outward Bound recommends nylon hiking shorts with no underwear to participants in all-female, adult programs. But many women, particularly those in co-ed crews, may prefer the comfort and discretion provided by independent briefs. Additionally, independent briefs provide more flexibility for the use of sanitary products during the menstrual cycle. Both Cathie Cummins and Mimi have

used CoolMax briefs on previous treks and have been pleased with their durability, moisture wicking and drying attributes, and ease of laundering.

The combination of climate, physical exertion, and sanitary conditions at Philmont, provides an increased possibility of candidiasis, or yeast infection, in women. The first-aid kit for co-ed crews should contain a non-prescription anti-fungal medication, such as Monostat 7. Most adult women know whether or not they need to carry this item for themselves, but teenage girls might be surprised by the infection, so travel prepared.

Philmont is known for its wide open spaces and does not afford very much privacy. This was not a big problem when Boy Scouts alone hiked the trails. With the influx of women on the trail, there has been a change in the backcountry. Most Scouts who attend Philmont are mature enough to handle the change. As an advisor to a co-ed crew in 1990, Wally was particularly impressed by how other crews camping nearby went out of their way to respect of the privacy of the female members of his crew.

Latrines have also had to change at Philmont. Although Philmont is building covered and enclosed latrines, there are still some open air latrines at some of the more remote camp sites. These rustic latrines come in two varieties; the pilot to bombardier (two holer, back to back) and pilot to copilot (two holer, side to side) and are the source of some great campfire skits. In fact, some these latrines are so close to the trails that one can watch a crew walk by while doing his daily constitutional. Unless latrines at a camp are enclosed, many female crew members may prefer to use nature instead. The crew chief of a co-ed crew should keep privacy needs in mind when selecting a campsite, preferably choosing a site that is unpopulated on at least one side. If such a site is not available, crew members of a co-ed crew should be a little more aware of who is using latrine before just walking up. Crew members may want to go to these rustic latrines in pairs, with one as the lookout who stands between the latrine and the camp site.

Washing up can also present a problem for a co-ed crew. Philmont requires hikers to wash up at the sump so that odors can be concentrated. However, the sump is usually out in an open area with absolutely no privacy. Wally's co-ed crew simply washed in shifts using a large opaque ground sheet that was set up around the sump to provide for some privacy.

Lack of privacy also makes it difficult for women to urinate on the trail. For male crew members, it is no big thing. He can take ten or fifteen steps off the trail and relieve himself while leaning nonchalantly against a tree, taking in the great views of the mountains and not even taking off his pack! For female crew members, it can be a little more of an effort. As a result, some female crew members may not drink enough water, just to keep from urinating on the trail. Insufficient water intake can result in dehydration and increases the risk of urinary tract infection (UTI) which must be treated with antibiotics, and would undoubtedly result in that female crew member being taken off the trail. There are several small plastic funnel-type devices available such as the "Lady J" or the "Freshette" which will allow a woman to urinate while standing, with a minimum of exposure.

You want all of your crew members to have urine output that is "clear and copious". If you have a co-ed crew, make sure everyone "camels up" and be ready to take more time on the trail. If a crew member needs to stop, have the remainder of the crew hike ahead while another crew member stands lookout for any crews coming from behind. Let your crew know that becoming dehydrated can cause severe problems and will slow the crew down even more than stopping to take an occasional leak on the trail.

A quick note on latrine use for **both sexes**. Urine is basically a sterile product and does not contain the pathogens found in feces. However, it does contain salts that do attract animals. If you are on the trail and need to urinate, the best way is to fall behind the rest of the crew and urinate on the trail itself. Remember that the trail is a narrow band of land that has already been sacrificed to allow us into the backcountry. In the old days, we used to tell a camper to just "find a tree". However, urinating on a tree puts salt on the bark that will attract animals that will ultimately eat the bark and destroy the tree. If a crew member needs to defecate on the trail, he or she needs to take the shovel, toilet paper and a small stick, and find a spot at least 200 feet from a water source or the trail. Use the shovel and remove the top cap of soil that contains the micro-organisms that will ultimately reduce the feces. Dig the hole approximately 6 inches deep. After defecating and cleaning with the paper, add dirt to the hole and mix it in with the feces using the stick. The crew shovel should never come in contact with feces! To the uninitiated, this might sound like a disgusting task, but adding the soil will immediately eliminate any odors. Mixing the soil, feces and paper together into a "poop soup" will facilitate the decomposition of the feces and the paper. Once you have used up all of the soil, replace the top cap and insert the stick so that someone else will not dig in the same area. When using Philmont's backcountry latrines, do not urinate in them. The urine's salt will act as a preservative, increasing the decomposition time for the feces. Also, any urine that gets on the latrine's wood, will attract animals. In many latrines, you can actually see where porcupines and other animals have

chewed the seat area.

As we discussed in the Personal Hygiene section of this guide, it is extremely important to wash off the salt and grime that accumulates each day to prevent "hiker's rash". Cathie and Mimi recommend that female crew members bring bras to Philmont that can be washed and dried each day. There are an increasing variety of sport bras available, with the largest selection manufactured by Champion, in styles to match individual builds. Champion outlet stores provide a full range of options at significantly reduced prices. Check the fabric content in each style. Look for Lycra for support and CoolMax for breathability, rather than cotton, as both dry quickly. Cathie and Mimi suggest bringing two bras; one as a "hiking" bra and the other as an "in-camp" bra. The hiking bra should be washed each day. Although it may wet first thing in the morning, it will not matter because it will either dry quickly or just get wetter when you begin sweating.

When choosing long pants, female crew members may want to consider warm-up style pants with elastic waists and ankle zippers, which allow the flexibility to dress without removing shorts and boots, in areas where privacy is hindered.

Weather

Weather at Philmont is unlike that experienced in the East. You may start the day hiking in the heat and the dust only to find yourself being pounded by hail in an afternoon thunderstorm and finally going to sleep in the high country with the temperatures falling below freezing. Your crew must be prepared to handle these weather conditions. Rain gear and pack covers should be located in a pack's outside pocket to allow crew members to quick access. It is extremely important that crew members stay dry in the event of bad weather because of the risk of becoming hypothermic.

You can expect rain and possible thunderstorms each afternoon at Philmont. Lightning has killed Philmont hikers in the past. Remember that mountains may block your view of an approaching storm and that most lightning strikes occur on the leading edge of a storm, so take immediate action to seek protection once you see dark clouds heading your way or hear thunder. Lightning is attracted to objects that will conduct electricity to the ground along the path of least resistance. Since trees are usually the tallest conductors, they will usually take the worst beating in a thunderstorm. Wire fences and bare, exposed mountain tops are also likely targets for lightning. Lightning has been known to follow the face of a cliff down to the ground, so stay out from under cliffs and overhangs. If you are on a ridge or a peak, make a beeline down the hill, staying on the side of the hill opposite the approaching storm. You should be safe if you are under some sort of forest cover, at least 100 yards down from the peak or ridge line. Never begin an ascent in the face of a threatening thunderstorm. Save that peak for a day when the weather is better.

Most camps at Philmont are located under trees and are not on exposed mountain tops. If you are in camp when a thunderstorm hits, you should be in good shape. Stay away anything that can conduct electricity including metal tent poles, bear bag wires, and backpack frames. Keep everyone within eyesight of each other and don't all bunch up. This way, if one person is hit, the others can administer first aid. If you are bunched up, one stroke of lightning could injure the entire crew. If you are caught in the middle of a meadow, you become the most prominent object. If the threat of lightning is imminent, try to seek a stand of trees. If this is impossible, squat down on your sleeping pad with only your feet touching it; this is the "lightning position". Do not lie down since lightning can travel along the ground. Thunderstorms at Philmont commonly bring hail. For quick cover, head for a stand of even-sized trees. If you get caught in a hail storm, the temperature can drop rapidly so get everyone into rain gear. If lightning is not present, get into a tent or under a fly.

The Tooth of Time Ridge can be an unfriendly place during a lightning and thunder storm. The trail is a rugged, rocky, majestic path offering magnificent vistas of the valley floor to south and as far as the eye can see to the north. This trail straddles a classic "hogback" ridge. Because its sides slope abruptly away, there is little opportunity to get off of the ridge. In 1991, Doug Cox's crew was caught by a storm while hiking over Tooth Ridge. Early in the morning, his crew had left Webster Parks with the destination of Tooth Ridge Camp. At about 1:30 pm when his crew was halfway down the Tooth Ridge, the storm hit. Because his crew could see the storm coming, they had plenty of time to form a packline and cover it tightly with their rain fly. The crew then moved as far off the ridge as possible, put on their rain gear, squatted on their sleeping pads, and rode out the storm. Lightning struck close enough for them to smell the ozone in the air. The lesson learned by his crew was not to panic. While they would rather not have been on that ridge, they took the correct actions to protect themselves. Doug says that his crew still talks about that afternoon, but the storm gets bigger with each re-telling.

Rain can also cause drastic changes in watershed areas. Camps located in canyons or narrow valleys usually get the most water. If you are in one of these camps and the stream begins to rise unusually fast, it is a sure sign of imminent

flooding. If you see that the stream is about to crest its banks, evacuate the area immediately, taking as much crew gear as possible. If the flooding is widespread, you may have to spend several days on your own before you are rescued. Even a small amount of supplies and gear can make the group more comfortable.

In the event of extended rain, it is important to keep morale high. In 1991, Wally's crew experienced seven straight days of bad weather. Crew members can sink into depression, if someone doesn't keep the morale up. Crew members should understand that rainy days are a part of nature. In fact, it is the comparison with rainy days that makes the sunny days that much more sweeter. Troy Hayes' troop has a saying that "weather determines what you wear, not what you do". Warm clothes and warm meals help to keep people operating with a positive attitude. Cook and eat your meals together under the dining fly. Move meals around to make sure the crew has something warm to eat when it is cold and wet. When the weather breaks, take the time to dry out wet gear. Your personal attitude and that of your crew leader will have a big impact on how inclement weather affects the crew.

Leaving Camp

Leaving camp is the advisor's main source of aggravation. Watching crews take hours to vacate the camp site is very frustrating. Crews work at a pace such that individual members will not be asked to do any extra work. Even though Scouts are supposed to "help other people at all times", they seem to think that "work" is a dirty four letter word that ends in "k". If you are not cooking breakfast, leaving camp should not take any longer than 45 minutes. If the crew wakes at 5 am, the crew leader must wake up at 4:50 am. Each crew member should not take more than 10 minutes to wake up, put their clothes on, and stuff their sleeping bag. It should not take any longer than 20 minutes to retrieve the bear bag and for the crew leader to distribute the gear. While the bear bag is being retrieved, the dining fly and tents should be taken down. Once the gear is divided, it should not take more than 10 minutes for everyone to finish packing and make a pack line. It should not take any longer than 5 minutes to do a clean sweep of the campsite. And that takes 45 minutes. Even at high elevations when it is below 40 degrees and wet, the crew must just decide to do it!

There are several good reasons for getting on the trail early. By leaving camp early, you avoid the heat of the day. It can really begin to cook on the trail after 11 am. It also avoids hiking during afternoon thunderstorms that typically occur between 1 pm to 5 pm. By leaving camp early, you arrive at program areas before they become crowded with other crews and while the staff is generally less fatigued and more enthusiastic. By leaving camp early, you also have a chance to see more wildlife. Finally, by leaving camp early, you have more options for your trek; perhaps a side hike up Trail Peak, a chance to wash clothes and dry out, a good game of volleyball with the staff, or maybe just a lazy afternoon watching the clouds drift by.

But if I leave camp early, what do I do about breakfast? There is no rule that breakfast has to be eaten as the first meal each day. On the trail, food is simply food. Why not substitute a no cook lunch for your cooked breakfast? Or if the next staffed camp with a program activity is only a mile or two away, get up and leave your overnight trail camp early so you can arrive and have your breakfast outside the Ranger's cabin. The Rangers will be impressed and may offer to take your crew for an early program time. Even when Wally's crews did not have a staffed camp in the near vicinity, they liked to leave their overnight camp and eat at a scenic overlook perhaps a mile or two away.

When hiking out of the camp, pass by the water supply to "camel up". After "cameling up", be sure and fill your canteens and purify them if required.

Trail Meditations

It always has been the responsibility of Boy Scouting's adult leadership to provide an opportunity for their Scouts to observe the twelfth point of the Scout Law, "A Scout is Reverent". This is especially true at Philmont where the use daily meditations has been found to be an excellent means to provide a time of thoughtful reflection for individual crew members. Daily meditations have also helped crew members bond themselves into a harmonious unit that can overcome the challenges of fatigue, bad weather or rough terrain.

During the advisor's meeting conducted the first night at base camp, each member of the crew will receive *Eagles Soaring High, Trail Worship for Christians, Muslims and Jews*. This is an excellent resource that can be used by the crew to conduct short meditations while on the trail. The booklet has been specifically written to mirror the needs of crew members. For example the meditation for Day 4 on the trail speaks of forgiveness. By this time, everyone has somebody they need to ask forgiveness from! As you hike along the trail in the first part of the morning, stop at an overlook and take a couple of minutes to do a meditation. You will find that the natural beauty of Philmont provides the ideal outdoor

place of worship.

Another way that a crew can display reverence and build unity as a group is through the use of grace at meals. No matter how difficult the day or how hungry the Scout, time should be taken to give thanks for the food and those who prepared it. Saying grace together can become almost magical after a while. Several suggested graces for meals in addition to the Philmont grace are contained in *Eagles Soaring High*.

A Philmont trek is really a workshop in group behavior and dynamics. If the weather has been bad or if the terrain has been difficult, a crew can come apart at the seams. The cooperation and enthusiasm that was present on the first day of the trek can disappear only to be replaced with frustration or even anger. Adults can be especially vulnerable to this frustration. It is up to the advisor to help the crew leader keep the crew working together as a group, so that the Philmont experience will be one in which the crew members will have grown, both physically and emotionally. A non-threatening technique that is now being taught by Philmont Rangers as a means to share feelings and resolve conflicts is "Thorns, Roses and Buds" or simply "Thorns and Roses". Each day, no matter how tired you are and no matter how much a crew member wants to go to bed, the crew should pause and allow each member reflect on his feelings. "Thorns and Roses" can be done immediately following a daily meditation or perhaps at the end of the day. The crew sits in a circle and each member has an opportunity to say the worst (thorns) thing that has happened to him that day, the best (roses) thing, and voice future expectations (buds). There are only three ground rules.

- First, if a crew member does not want to speak, he does not have to.
- Second, only one person speaks at a time and no one can question what is being said.
- Third, what is said in the circle, is left at the circle and not discussed again.

"Thorns and Roses" works. It allows the crew to discipline themselves, without adult intervention. In fact, during Coop's 1992 Philmont trek, several crew members asked for a "Thorns and Roses" session because there were problems in the crew that needed to be solved.

Hiking Into Base Camp

Philmont is truly an adventure, so celebrate in your accomplishments. As a matter of personal pride, Doug Cox suggests that your crew look their best the day they come back into Base Camp. This is especially true if they hike in from the Tooth of Time. Most crews will return ragged, dirty, and weary looking, and rightfully so. But you hiked Philmont's trails - the trails did not hike you. You made it! Come in with you head held high and not looking whipped.

The secret is to plan your return. By now, your trail clothes are pretty disgusting, even if you have washed them every day. On the morning of your return, why not wear your in-camp clothes instead; or your sleep shirt, since it is probably your cleanest shirt. Trust us, people will notice and your crew will have the same excitement about coming in as they did going out.

BACK AT BASE CAMP

Returning to Base Camp

Sometime around day 5, one of your crew members will begin talking about the ice cream cone (or two) that he is going to get as soon as he gets into base camp. If you let your crew disperse when they arrive back in base camp, the only one available to do the base camp in-processing will be you! One of the best ways to bring order out of this chaos is to hold a crew meeting in the shade of the trees behind the Services building and assign all tasks that must be completed before the crew can be released. All crew gear, whether borrowed from Philmont or brought from home, must come out of packs and be cleaned and inspected. Be prepared to scrub out all pots and pans with steel wool and dry out your tents and crew tarps. If you borrowed gear from Philmont and it was damaged while in the backcountry, have some money available to pay at Services. Any extra food and fuel can also be returned at Services.

While the crew leader is supervising this effort, the crew advisor should gather up the crew leader's itinerary sheet, wildlife census cards and the safe deposit signature cards and head down to the Welcome Center. At the Welcome

Center, the crew is logged in, given tent assignments and the advisor receives a detailed out processing sheet that must be completed. The next stop is the Security building, where the advisor picks up the keys to the crew's lockers. The advisor heads for the Registration desk, where the wildlife census cards are turned in and any valuables that have been stored while the crew was on the trail are picked up. The last stop is Logistics, where the crew leader's itinerary is reviewed to determine whether the crew has met all requirements necessary to receive their Philmont arrowhead patches. The advisor then returns to the crew at Services, stopping at the Post Office to pick up mail received while on the trail. After all equipment is cleaned and turned in, the crew can head for the lockers to pick up the items left in storage and head for their tent site. **Only then**, should the crew be released for the trading post and snack bar.

Security

Not all participants in the Philmont experience are completely trustworthy. On the trail, security problems are quite uncommon. What incidents that do occur can probably be attributed as much to simple loss as theft. Common sense is the rule: keep the crew away from unoccupied neighboring camp sites and keep your own site buttoned down when you are away. If you are doing a side hike or "double dipping" at a camp you are passing through, set up your packline well off the immediate trail and cover everything with your tarp. It is also a good idea for keeping an unexpected rain from becoming a problem. Remember to hang your bear bags if you are going to leave your packs unattended.

Base camp is an entirely different situation. First, there is the simple reality of a very large group of Scouts and advisors, all crammed together in an unfamiliar and featureless tent city. With a million things to do and no readily identifiable markers to your area, it is natural and unavoidable for both Scouts and advisors to occasionally find themselves entering the wrong tent. It happens all the time. Normally, an incident like this is nothing more than a somewhat exasperating inconvenience. What turns out to be a security problem is the presence of "F Troop".

F Troop are the ones who washed out on the trail and found backpacking to be less appealing than a week-long stay at the Snack Bar. Unfortunately, Philmont has not yet devised a way to keep these individuals busy. After about two days, they are broke and bored stiff. For the sake of your crew, keep truly valuable items at the security office or in the crew locker. Your crew should always keep as much of their gear zipped up in their packs or under cover, especially when while you are at meals, at a base camp activity or campfire. This goes double for wallets, cameras, and patches.

IN CLOSING

Hopefully this guide has provided you with a better understanding of some of what a Philmont trek is all about. In the final analysis, it is impossible to fully describe or appreciate "**Philmont**" without actually experiencing it for yourself. And regardless of how many times you've been before, your next experience will be different because each trek is unique. As stated earlier, the purpose of this guide is to provide crew advisors with our opinions regarding things that your crew can do to help them make their Philmont experience the best possible one. Plan on having the time of your life in God's country – You Will!

APPENDIX A

PHYSICAL PREPARATION FOR A PHILMONT TREK

To enjoy a Philmont experience, everyone who plans to take a trek must be physically prepared. At Philmont every person will carry a 30-40 pound pack over steep, rocky trails at elevations ranging from 6,000 feet to 12,441 feet. A regular program of physical conditioning for at least three to six months prior to taking a trek is essential. A longer period is required for those who are more than 25 pounds overweight and for those unaccustomed to physical exercise.

The first step is to get a physical examination from your physician. Use the forms provided by Philmont that will be mailed in January. Complete the health history on page 1 and then schedule a time for a physical exam.

Staff physicians at Philmont reserve the right to deny access to the trails to any adult or camper on the basis of the physical recheck at Philmont. All medical evaluation forms will be checked by Philmont medical staff. Areas of concern include, but are not limited to: heart disease, seizure disorder, sickle cell anemia and hemophilia. Blood pressure without medication must be less than 150/90 for any participant to be permitted to hike on Philmont. Adults or youth participants who are more than 25 pounds overweight should begin a program of exercise and dieting at least six month prior to a

Philmont trek. If there are any doubts after the individual has had a physical examination, contact Philmont.

A program or regular aerobic exercise is highly recommended to become physically conditioned for Philmont. Plan to exercise for 30 to 60 minutes, 3 to 5 times a week.

Jogging, running uphill or long flights of stairs and hiking with a full pack are excellent preparation. How fast you run or how far you go is not nearly important as regular exercise. Other aerobic exercise such as swimming, bicycling, stationery cycling and aerobic exercise classes can supplement your training. Start slowly and gradually increase the duration and intensity of your exercise. If anyone has questions, contact the family physician.

Backpacking is the best way to prepare for a Philmont trek. It is highly recommended that everyone in a Philmont crew fulfill the requirements for Backpacking Merit Badge. These include three 15 mile treks with two overnights each and one 5 day backpacking trek covering at least 30 miles. Fulfilling these requirements will enable you to enjoy a Philmont trek. Be prepared!

SUGGESTED CONDITIONING PROGRAM

MONTH CONDITIONING

JANUARY Complete health history on individual medical forms and get parents approval (signature).

Be examined by a physician or osteopath. Call attention of the physician to the note on the medical form that describes the rigors of a Philmont trek and to the box that indicates areas of medical concern. Ask the physician about any special medical needs or areas of concern. If overweight, get physician's recommendation on how to lose weight through dieting and/or exercise.

FEBRUARY Walk, jog in place, swim or pedal exercise bike indoors for 20 minutes or more at least 3-5 times a week. Gradually increase the length and intensity of exercises.

Purchase a pair of quality hiking boots. A pair of boots 6 to 8 inches high with sturdy soles are recommended. Lightweight hiking/running footwear is excellent for dry, rocky trails that are prevalent at Philmont. They are not recommended for people with weak ankles who need heavier leather boots. Wear your boots to school or work and when walking anywhere to break them in and to condition yourself.

MARCH When weather permits jog, run or walk outdoors. Start with 20 minute sessions and gradually increase the length and the incline or speed.

APRIL Continue exercising. Schedule a couple of 5-10 mile day hikes. Carry a full backpack on the second hike.

MAY Continue exercising. Schedule at least two overnight backpacking treks of 10-20 miles. Plan the second trek to cover more rugged terrain or increase the mileage. Consider meeting the requirements for Backpacking Merit Badge that includes 3-three day backpacking treks of at least 15 miles each and 1-five day trek covering at least 30 miles.

JUNE/JULY Continue exercising right up to the day you depart for Philmont. Come to Philmont in top physical and mental condition ready for backpacking a 30-40 pound pack over steep, rugged trails at high elevations (6,000 to 12,441 feet).

APPENDIX B

CREW LEADER'S ORIENTATION

Congratulations on being selected as a crew leader. Yours will be an experience that will never be forgotten, and will provide you with a unique opportunity to better your leadership abilities, and interpersonal skills. You are the quarterback, and your team will be depending upon you to give them good leadership. Just as with any good quarterback, you need a game plan. This orientation will help you put together a game plan that will give you the best chance of success in the Super Bowl of Scouting: Philmont.

A good game plan always involves planning ahead, and preparing for all foreseeable circumstances. A crucial element of

any enjoyable outdoor experience is planning. The saying "an ounce of prevention is worth a pound of cure" is really apparent in the woods. Examples of circumstances you should plan for include: the route for each day, how long it will take your crew to get to a destination, finding water sources along the way, looking at the map to determine which geographical feature you should pass so you do not go the wrong way, etc. As you can see, it is necessary to plan for each day.

An excellent way of measuring how well your plan was is to set goals for objectives that you would like to accomplish each day. Such goals would include: when everyone should get up in the morning, how fast camp should be broken, the time you want to get to your next camp, etc. These goals should be made by the entire crew at crew meeting held each night you are on the trail. It is amazing how much good planning and goal setting will make any outdoor experience more rewarding and enjoyable.

A Ranger will be assigned to your crew at the beginning of your Philmont trek. The Ranger is knowledgeable of outdoor skills and developing teamwork, and will orient your crew to the fundamentals of camping at Philmont. He or she will also give you suggestions on how to plan, and how to implement those plans.

You, the crew leader, are the quarterback of your crew, and it is your responsibility to make sure the game plan is followed. Any good quarterback needs to know how to be an effective leader. Being a good leader means assuming leadership early and using an appropriate leadership style to fit the needs of each situation. Let your crew know that you are its leader, and that you call the plays.

Upon being selected as the crew leader, you were given authority, it is now up to you to earn the respect of your crew, making sure that they always feel like they are part of the team. It is also important to know when to assert your leadership and when to be a diplomat. This is a difficult aspect of leadership, and you should use every resource at your disposal concerning this point. If you are too assertive in leadership, your crew will look upon you as a dictator; however, if you are too diplomatic, some members of your crew will likely run all over you. Finding a happy medium separates the exceptional leaders from the inadequate ones. It is often helpful to look back to the leaders you respect, and examine how they dealt with different situations. You will probably find that they almost, without exception, all led by example.

Perhaps the most difficult task you will face as crew leader is developing teamwork within the crew. As the leader, it is up to you to set a positive tone for the group. If you are negative, then the rest of the group will probably be the same. A positive attitude will help the crew get through almost any situation. Another aspect of developing good teamwork is resolving conflict early before it develops into a more serious matter. It is extremely important to always be aware of signs of conflict. You should consult your advisors about any situation that you are uncomfortable in dealing with.

As with any team, it takes time to develop good teamwork, and much effort should be taken in going on as many training hikes as it takes to get everyone working together as a team. A helpful tool in developing good teamwork is putting together a duty roster that splits up tasks such as cooking, cleanup, etc. A duty roster form will be provided when you arrive at Philmont.

As the quarterback, you are not alone in making decisions; you have at least two coaches. At Philmont these coaches are known as advisors, and they are key members of your crew. They will give you a lot of valuable insight on how to be an effective crew leader, and you should try to get as much advice from them as possible. Before coming to Philmont, sit down with your advisors and discuss your expectations of them and their expectations of you regarding your respective leadership roles with the crew. They have experience with leadership, and will help you immensely in developing your leadership ability.

Hopefully, this orientation will have given you some idea as to what awaits you in your role as crew leader. Your Ranger will provide additional guidance during your orientation at Philmont. Remember, find your own leadership style and develop it. The most effective way of becoming a better leader, however, is practice. We look forward to having your crew at Philmont, and wish you the best of luck as the crew leader.

The Philmont Staff

APPENDIX C

RECOMMENDATIONS REGARDING CHRONIC ILLNESSES

Philmont requires that this information be shared with the parent(s) or guardian(s) and examining physician of every participant. Philmont does not have facilities for extended care or treatment, therefore, participants who cannot meet these requirements will be sent home at their expense.

A Philmont trek is physically, mentally and emotionally demanding. Each person will carry a 35 to 50 lb. pack while hiking 5 to 12 miles per day in an isolated mountain wilderness, ranging from 6500 to 12,500 feet in elevation. Climatic conditions include temperatures from 30 to 90 degrees F, low humidity (10-30%) and frequent, sometimes severe, afternoon thunderstorms. Activities include horseback riding, rock climbing and rappelling, challenge events, pole climbing, blackpowder shooting, 12 gauge trap shooting, .30-06 shooting, flint knapping, trail building, mountain biking and other activities that may have potential for injury. Philmont strives to minimize risks to participants and advisors by emphasizing proper safety precautions. Refer to the Guidebook to Adventure, which will be mailed in mid-March, for specific information. Philmont staff instructs participants in safety measures to be followed. Each participant and crew is expected to follow these safety measures and to accept responsibility for the health and safety of each of its members.

Cardiac or Cardiovascular Disease

Adults or youth that have had any of the following should undergo a thorough evaluation by a physician before considering participation at Philmont.

1. Angina (chest pain caused by coronary artery disease)
2. Myocardial infarction (heart attack)
3. Surgery or angioplasty to treat coronary artery disease; surgery to treat congenital heart disease or other heart surgery
4. Stroke or transient ischemic attacks
5. Claudication (leg pain with exercise caused by hardening of the arteries)
6. Family history of heart disease under age 50
7. Excessive weight
8. Smoking

The altitude at Philmont and the physical exertion involved may precipitate either a heart attack or stroke in susceptible persons. Participants with a history of any of the first six (6) conditions listed above should have a physician supervised stress test. A thallium stress test is recommended for participants who have coronary heart disease. Even if the stress test is normal, the results of testing done at lower elevations and without the backpacks carried at Philmont do not guarantee safety. If the test results are abnormal, the individual is advised not to participate.

Hypertension (high blood pressure)

The combination of stress and altitude appears to cause significant increase in blood pressure in some individuals hiking at Philmont. Occasionally hypertension reaches such a level that it no longer is safe to engage in strenuous activity. Hypertension can increase the risk of having a stroke, developing altitude sickness, or angina. Persons coming to Philmont should have a normal blood pressure (less than 135/85). Persons with significant hypertension (greater than 150/95) should be treated before coming to Philmont, and should continue on medications while at Philmont. The goal of treatment should be to lower the blood pressure to normal. Persons with mild hypertension (greater than 135/85 but less than 150/95) probably will require treatment as well. It is the experience of the Philmont medical staff that such individuals often develop significant hypertension when they arrive at Philmont. Participants already on antihypertensive therapy with normal blood pressures should continue on medications. Diuretic therapy to control hypertension is not recommended because of the risks of dehydration, which exist with strenuous activity at high altitude and low humidity. Each participant who is 18 years of age or older will have his or her blood pressure checked at Philmont. Those individuals with a blood pressure consistently greater than 150/95 probably will be kept off the trail until the blood

pressure decreases.

Insulin-Dependent Diabetes Mellitus

Exercise and the type food eaten affect insulin requirements. Any individual with insulin-dependent diabetes mellitus should be able to monitor personal blood glucose and know how to adjust insulin doses based on these factors. The diabetic person also should know how to give a self injection. Both the diabetic person and one other person in the group should be able to recognize indications of excessively high blood sugar (hyperglycemia or diabetic ketoacidosis) and to recognize indications of excessively low blood sugar (hypoglycemia). The diabetic person and one other individual should know the appropriate initial responses for these conditions. It is recommended that the diabetic person and one other individual carry insulin on the trek (in case of accident) and that a third vial be kept at the Health Lodge for backup. Insulin can be carried in a small thermos, which can be resupplied, with ice or cold water at most staffed camps.

A diabetic person who has had frequent hospitalizations for diabetic ketoacidosis or who has had frequent problems with hypoglycemia probably should not participate in a trek at Philmont until better control of the diabetes has been achieved. Call Philmont at (505) 376-2281 to obtain permission from the chief medical officer for individuals hospitalized within the past year.

Excessive Body Weight

Any youth or advisor who exceeds the maximum weight limits on the Philmont weight chart is at extreme risk for health problems. (See table at page 5)

Seizures (epilepsy)

A seizure disorder or epilepsy does not exclude an individual from participating at Philmont. However, the seizure disorder should be well controlled by medications. A minimum one year seizure-free period is considered to be adequate control. Exceptions to this guideline may be considered by Philmont's chief medical officer and will be based on the specific type of seizure and the likely risks to the individual and to other members of the crew. The medical staff at the Health Lodge may place some restrictions on activities (rock climbing, horse riding, etc.) for those individuals who are approved for participation but whose seizures are incompletely controlled.

Asthma

Individuals must consult with a physician in order to establish "good" control of their asthma. The asthma should be controlled to essentially normal lung function with the use of oral and/or aerosol bronchodilators. The patient should bring ample supplies of medication to Philmont. Individuals undergoing allergic desensitization therapy who require injections while at Philmont should bring and store them in the Health Lodge on arrival.

Asthmatic individuals whose exercise-induced asthma cannot be prevented with bronchodilator premedication; individuals requiring systemic corticosteroid therapy and/or who have required multiple hospitalizations for asthma should not attempt to participate in the strenuous activities encountered at Philmont. At least one other crew member should know how to recognize an asthma attack, how to recognize worsening of an attack, and how to administer bronchodilator therapy. Any person who has required medical treatment for asthma within the past six years must carry a full size prescribed inhaler if that person is approved to go on a trek. If an inhaler is not brought, it must be purchased at Philmont.

Recent Musculoskeletal Injuries and Orthopedic Surgery

Every Philmont participant will put a great deal of strain on feet, ankles and knees. Participants who have had orthopedic surgery, including arthroscopic surgery or significant musculoskeletal injuries, within the past six months, find it difficult or impossible to negotiate Philmont's steep rocky trails. To be cleared to backpack by the Philmont medical staff, individuals with significant musculoskeletal injuries or recent orthopedic surgery must have a letter of clearance from their orthopedic surgeon or treating physician. A person with a cast on any extremity may participate only if approved by a Philmont physician. Ingrown toenails are a common problem and must be treated 30 days prior to arrival. All such problems will be reviewed by a Philmont to determine if participation in a trek will be permitted.

Psychological and Emotional Difficulties

A mental disorder does not necessarily exclude an individual from participation. Parents and advisors should be aware that a Philmont trek is not designed to assist participants to overcome psychological or emotional problems. Experience demonstrates that these problems frequently become magnified, not lessened, when a participant is subjected to the physical and mental challenges of a trek at high elevation, carrying a heavy backpack over steep, rocky trails. Any condition should be well controlled without the services of a mental health practitioner. Under no circumstances should medication be stopped immediately prior to a Philmont trek. Participants requiring medication must bring an appropriate supply. The nearest mental health support is (3) three hours from Philmont.

Medications

Each participant at Philmont who has a condition requiring medication should bring an appropriate supply. The pharmacy at the Health Lodge is limited and the identical medication may not be available. In certain circumstances, duplicate or even triplicate supplies of vital medications are appropriate. People with an allergy to bee, wasp or hornet sting must bring an EpiPen or equivalent with them to Philmont.

An individual should always contact the family physician first and call Philmont at (505) 376-2281 if there is a question about the advisability of participation. Philmont's chief medical officer and other medical staff of the Health Lodge reserve the right to make medical decisions regarding the participation of individuals at Philmont.

APPENDIX D

SUGGESTED CREW EQUIPMENT

(for an 8-12 member crew)

Equipment easily brought from home

3 backpacking stoves

2 1-liter fuel bottles with pour spouts (one for each stove)

1 Coleman fuel filter funnel

4 4-quart pots with lids (or one 6-quart billy pot and two 4-quart pots)

2 large spoons

1 wire whisk (Coop carries to mix desserts, Wally does not)

1 measuring cup

1 2-quart drink pitcher (Coop carries, Wally does not)

1 hot pot tong or pliers

1 nylon mesh dish bag (or 3 x 3 foot plastic sheet)

tents and ground cloths as appropriate

10 tent stakes for dining fly

2 2-1/2-gallon water bags

2 compasses with declination devices

2 Philmont maps

- 1 crew first aid kit
- 1 crew repair kit – needles, thread (dental floss), duct tape
- 1 butane lighters or waterproof matches
- 1 spice kit
- light weight shovel (Coop brings a U-Digit)

Equipment issued by Philmont

- 3 bear bags
- trash bags
- bear bag rope
- dining fly with poles
- frisbee sump plus rubber spatula
- Polar Pure water purification crystals (one for every two crew members)
- toilet paper
- 1 plastic scrubbie
- 1 plastic bottle of Camp Suds

APPENDIX E

SUGGESTED PERSONAL EQUIPMENT

Equipment Worn or Packed for Travel Equipment Worn or Packed for Trail

- 1 Scout uniform 1 pack
- 1 pair Scout socks (if shorts are worn) 1 pack cover or several large trash bags
- 1 neckerchief slide 1 hot spot kit
- 1 pair sneakers/moccasins moleskin bandaids
- 3 pair underwear shorts foot powder small scissors
- 3 t-shirts sun screen (30 SPF or higher)
- 1 large towel 1 pair hiking boots (recently waterproofed)
- 1 Scout red jacket (optional) 2 or 3 pair wool/nylon ragg or Thorlo socks
- 1 Scout belt 2 or 3 pair sock liners
- 3 1-quart canteens

Equipment for Travel and Trail 1 pair long pants (or shorts over long underwear)

1 sleeping bag inside a plastic bag, 2 pair nylon shorts w/ brief (one hiking, one in-

in a waterproof stuff sack camp)

1 set of sleep clothes (inside sleeping bag) 1 long sleeve synthetic fleece sweater or lightweight

1 sleeping pad wool sweater

1 toilet kit 1 nylon windbreaker or light jacket (optional)

toothpaste and brush 20 feet of 1/8 " nylon line (parachute cord)

biodegradable soap (Camp Suds) 2 bandannas

comb or hair brush 1 pair synthetic long underwear

small mirror 1 knit hat

extra sanitary products (women) 1 wash basin (bottom half of plastic gallon

sun glasses milk container or Clorox bottle)

chap stick (Carmex recommended) 1 small towel (can use a bandanna)

\$ 100-125 for souvenirs 2 t-shirts (one synthetic, one 50/50)

watch 1 pair camp shoes

camera with film and extra camera 1 cap (baseball or wide brim)

batteries (optional) 1 emergency blanket/ground sheet

1 flashlight (with new batteries) safety pins (for hanging wash on pack)

1 rain suit 1 mess kit

large plastic mug spoon

extra trash/Ziploc bags

1 pair wool in-camp socks (optional)

1 pair of gaiters (optional)

clothes pins (optional)

1 hike log and pen (optional)

pillow (optional)

Advisor's Pad (optional)

1 pocket knife (optional)

5 post card stamps

APPENDIX F**SUGGESTED FIRST AID KIT**

24 Advil or other ibuprofen pain reliever tablets*

24 Benadryl or other antihistamine tablets for colds and allergies*

24 Imodium AD or other over the counter medication tablets for diarrhea*

Mycitracin or other triple antibiotic ointment or cuts, scrapes, and burns

Tolnaftate (Ting), miconazole (Lotrimin spray), or clotrimazole (Mycelex cream) for athletes foot or jock itch

Spenco Second Skin for blisters

1 roll of adhesive tape

24 bandaids

10 2" by 2" gauze pads

10 butterfly bandaids

1 Cortaid or other non prescription hydrocortisone cream for rashes

1 Visine or other type eye wash

1 tincture of benzoine to toughen skin and help glue on moleskin

moleskin and molefoam

2 needles for removing splinters

1 set of tweezers

1. Ace bandage

1. nail clippers

1 scissors for cutting moleskin and adhesive tape

* must receive permission before giving to non adult crew members