

BEAR SAFETY - A CONVERSATIONAL GUIDE FOR SCOUTS

*“Everything You Ever Wanted to Know About
How to Protect Yourself from Bears (and more....)”*

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[Detailed “How-To” information excerpted especially for Philmont crews.]

- FACT:** There is only one animal on the North American Continent that will actively hunt and kill human beings for food -- the Polar Bear.
- FACT:** There are four other animals in North America who will (rarely) take advantage of a sick, injured, or stupid human being, and make a meal out of them – the Alligator, Grizzly Bear, the Mountain Lion, and the Wolf (the latter in packs).
- FACT:** [However,] there are dozens of other animals and reptiles in North America who can and will kill or put a severe hurting on a human being if circumstances warrant -- bobcats, coyotes, deer, (wild) dogs, elk, javelinos, lynx, moose, feral (wild) hogs, poisonous snakes, wolverines, *etc., etc., etc.*

Of all these, the best known is the common black bear, *Ursus americanus*.

In reality, black bears represent a more realistic threat to humans than polar bears, alligators, grizzly bears, mountain lions, or wolves, because of their rapidly increasing numbers, the extensive overlap of their habitation range with human domains, their increasing familiarity with human beings, high degree of intelligence, excellent memory, and legendary strength and fighting ability. On his or her turf and terms, even a small bear is a potentially deadly opponent.

Yet for all that, the threat level is almost minuscule. As implied in the three preamble “Facts,” predatory black bear attacks on humans are extremely rare (less than 25 documented predatory attacks resulting in human deaths, last “century”), and even provoked attacks are relatively uncommon. [This from an estimated current population of half million black bears in North America.] For the most part, black bears studiously avoid human confrontation. Why? - well, bears are still hunted by humans (both legally and illegally), and we’re therefore well recognized by them as being a lethal threat. Plus we’ve spent the last 400 years shooting most of the hyper-aggressive bears in the lower 48, so artificially induced Darwinian selection has definitely played a role in our favor. Today, there’s really only three ways to get in trouble with a black bear (in order of degree of danger):

- * Actively threaten a cub (a.k.a.: “Death Wish”).
- * Surprise one on the trail (a.k.a.: “Close Encounters of the Worst Kind”).
- * Be careless with respect to food and other “smellables” use, cleanup and storage.

Situations 1 and 2 are easy enough to avoid, merely by paying attention to your surroundings and

making noise as you travel in bear country. Bears have excellent hearing, better than reputed (color!) vision, and an extraordinarily acute sense of smell -- and if a bear hears, sees, or smells you coming, you probably won't see him/her at all, or will only get a distant or passing view.

Noise is your most effective defense. Everyone has heard of the rather common (albeit highly irritating) trick of attaching small bells or similar items to backpacks in grizzly country; however, this really isn't necessary for Scout groups in black bear country. The average Scout group walking through the woods makes enough noise to be heard a quarter mile away, either from incessant chatter or from suspended gear rattling on their backpacks. However, solo hikers or small groups who are being intentionally quiet to maximize their chances of seeing wildlife, have to be a lot more cautious and alert.

Anyway, if you make noise while hiking or backpacking in the woods, and pay attention to your surroundings, you'll almost certainly never run afoul of Situations 1 or 2. Note, however, that extra caution is warranted in "white noise" situations which drown out your "bear alarms" or natural group noise; these include walking along noisy streambeds or in wooded areas during moderate to strong winds or rain. If you're walking through known bear territory under such conditions, it would be prudent to keep up the talking level or otherwise generate more noise.

SITUATION 3 -- "SMELLABLES" SAFETY

Once they get a taste of it, bears love human food, and will risk approaching humans in order to obtain it -- and with increasing boldness if they have successfully raided in the past. However, taking a few common sense precautions are invariably all that's needed to protect yourself, "and the bears!" Make it tough, and they won't bother - but make it easy, and they'll be back for more, forever....

WHAT ARE SMELLABLES? [A QUICK EDUCATION]

Mention "bear safety," and most people think "food." While correct, this is only the tip of the iceberg. A bear's nose is one of the most sensitive in the entire animal kingdom - allegedly they can differentiate between identical, factory-sealed cans containing food versus sand or other similarly inert materials (which is absolutely amazing!) Unfortunately, virtually "anything" with an unusual odor potentially is "food" to a bear. A short list includes: anti-bacterial wipes, bandages, Brillo pads, canteens that have ever contained a flavored drink (unless they've been sterilized with a solution of Clorox since that time), Chapsticks, clothing worn while eating meals or doing KP, deodorants, dryer (anti-static) sheets, feminine hygiene products, film, foot (or baby) powder, insect repellent, medications, "scrubbies", shampoo, soap, sunscreen, toilet wipes, toothpaste, **any and all trash**, unclean backpacks, unclean tents, and unclean utensils, eating ware, or cookware, *etc., etc., etc.*

Bit of an eye-opener, isn't it? And a bit scary, too. However, this also gives us the basis for bear safety: "Take Care of (All) Your 'Smellables!'" The following 15 step "Bear Safety

Checkoff List” spells out how to do this, in excruciating detail.

“BEAR SAFETY CHECK-OFF LIST”

1. Never, ever intentionally feed a bear (a.k.a.: “Don’t be a dumb-ass tourist!”)
2. Always practice proper, low-impact cooking and cleaning procedures, and never leave dirty cookware or eating ware out overnight.
3. Never eat in or near your tent, nor go to bed wearing the clothes you had on while eating or doing KP.
4. The only items that go into your tent each night are: You, your sleeping bag and foam pad/air mattress, your pillow, a flashlight, and either your “night clothes” or tomorrow’s clean clothes. Nothing else! [A real education for your average Scout, most of whom -- especially your youngsters -- want to bring everything they own into their tents at night.]
5. Be sure your tent, sleeping bag, foam pad/air mattress, pillow, flashlight and clothes are meticulously clean and free of trash. Note that use of a typical Troop tent in known bear country is a VERY BAD IDEA unless it has been thoroughly hosed out prior to your trip (all those soda spills, empty candy wrappers, and free-range M&M’s, don’t you know....)
6. Every member of your Crew must avoid using sunscreen, insect repellent, soap/shampoo, and/or topical medications after about 5 p.m. (some jurisdictions recommend 3 p.m.) Every member of your Crew must avoid using any deodorants, body lotions, hair creams, or similar products (at all.)

**Items 3 through 6 are four of your five most important check-offs.
Your equipment can be replaced; you can’t.**

7. Avoid burning waste or leftover food in fireplaces (rarely consumes the food entirely, but does a masterful job of spreading potent food odors downwind.)
8. If a sump (food cleanup and wastewater disposal area) is not available, disperse all wastewater well away from “any” potential tenting sites -- both the ones you’re intending to use, and any other flat areas which might be used by future campers.
9. Set up tents well away from your cooking, eating, cleaning, food sorting, and bear-bag areas (this is the basis for the “Bear-muda Triangle,” which is formally defined below.) Also, if you’re camping on an established campsite, set up your tents well away from the “Bear-muda Triangle” established by previous groups (if you can tell where it was.) Note that only heavy rains will render these areas scent-free again.
10. Check under any flat rocks laying on the ground near your tent -- a rapidly growing problem all across the country (including Philmont) is the stashing of trash under rocks,

either to prevent it from blowing away in the wind (and subsequently forgotten) or out of sheer laziness. Educate your own Scouts not to do this incredibly stupid thing.

11. Stow your backpacks well away from your tents, and properly wrapped in waterproof pack covers (which help keep residual pack odors down.)
12. Properly store ALL food, trash and all other “smellables” in bear bags, bear-proof containers or suspended out of reach, and well away from your campsite. (Much more on bear-bags below. Note well the comments on bear-bag storage of emergency medications such as inhalers or epi-pens.)

Item 12 is your fifth most important checkoff.

13. Never publicly bitch at a Scout or Adult for failure to get a “personal smellable” into a bear-bag “on-time;” this leads to all Scouts and Adults hiding late-discovered smellables rather than facing your wrath. Hard to resist when you’ve been calling for “smellables” for 30 minutes and just killed yourselves hauling 100 pounds into the air -- but resist you must. [See also “Micro-Bear-Bags” / “Oops Bags” below.]
14. Make a lot of noise when approaching bear bags, especially at night or at dusk or first light. Clapping your hands and talking in a normal tone of voice are excellent warning hints for any foraging bears (bears hate surprises!)
15. Always designate a responsible Scout or Adult to be your bear safety monitor while you’re camping in bear country. Always remember, education and vigilance are your best defenses!

This sounds like an awful lot to be careful about -- and it is! -- but with proper training, all of these precautions become ingrained and second nature to you and your Troop or Crew.

THE “BEAR-MUDA TRIANGLE”

The “Bear-muda Triangle” represents the area enclosed by the three points most likely to be visited by a raiding bear. At Philmont (which is where I first heard the term), these three areas are:

- (A) **the fire-ring** (food preparation and eating area, usually including the Crew tarp);
- (B) **the sump** (cleanup and wastewater disposal area); and
- (C) **the bear-bag area.**

If the Crew tarp (food sorting and organization area) is for some reason set up away from the fire-ring, the “triangle” turns into a “quadrangle” (not a geometrically correct term, but you get

the idea); in the latter case, the tarp should never be set up over a flat area where a future crew might choose to tent.

As stated in Check-off Item No. 6, no tents should be set up within or adjacent to the outlines of the triangle/quadrangle; similarly, no-one should “meadow crash” (sleep out under the stars) in this area, either. The “Bear-muda Triangle” should always be well established before anyone breaks out a tent.

BEAR-BAGS

Bear bags are large sacks in which you can place all your food and smellables, either for placing in a bear-proof storage locker, or (far more commonly) for suspending from ropes with their bottoms at least 8 feet off the ground and their sides at least 4 feet from the nearest climbable tree-trunk (10 and 6 feet, respectively, are better). At Philmont, the “classic” bear-bag was a large burlap sack (now replaced by woven polyethylene sacks), but many other items can also be effectively utilized as bear-bags. These include, for example, canoe stuff sacks, duffel bags, **large nylon laundry bags**, large capacity internal frame backpacks, trash-bags (contractor weight), and even large buckets or medium size trash cans.

Loading bear-bags is a matter of common sense; heavy items should be placed on the bottom, and crushable/breakable items on top. Of note, however, the **first aid kits should always be placed on the very top of “two separate bear-bags” -- on top so that they can be easily accessed at need, and in separate bear-bags so that if one slips out and falls, or is otherwise lost to a bear-raid, you still have the backup.** If you have more than two bear-bags, it’s also a good idea to visually mark the bags containing the medical supplies; this is easily done by having a bandanna sticking out the necks of the critical bear-bags. Note that **emergency medications (inhalers, epi-pens, etc.) should be kept either in an oops bag (see below) or (better) inside a boot with a sock stuffed on top, for quickest possible access if needed.**

SUSPENDING BEAR-BAGS

Although many campgrounds have installed bear-proof storage lockers (not further addressed here), most have not, and there are, of course, few storage lockers in the vast tracts of wilderness across North America. Thus, it is far more common for bear-bags to be suspended in order to keep them from bears, and anyone traveling in bear country should be familiar with standard methods for doing so. Yes, there are a variety of ways to hang bear-bags; the provided “briefs” (below) give descriptions of the most common, along with a quick primer on how to use them. First, however, a quick lesson on knots....

WHAT KNOT TO USE?

For virtually any bag-type bear-bag, the best knot to use -- by far -- is a lark’s head, wrapped around the twisted neck of the bag. The lark’s head is self-constricting, quick and easy to tie, quick and easy to untie (very important!), and does not require access to the end of the

bear bag rope to tie. Virtually any other constriction knot (like a clove hitch, two half-hitches, or a slip knot) will tighten overnight to the point where untying it is extremely difficult - especially if it rained or if the bags were extremely heavy. Non-bag-type bear-bags ("cargo"-style duffel bags, internal frame backpacks, canoe bags, trash cans, etc.) are more difficult; however, you can usually double the bear-bag rope over and tie two or three half-hitches to each container's handle. Doubled over, the ropes are usually a little easier to untie. One trick which will make your life a "lot" easier is to place a small, "smooth" stick (one - two inches in diameter, with no bark on it) adjacent to the handle, and tie the knot around the both the handle and the stick. The next day, you can slide the stick out from under the knot, giving yourself extra slack for untying the knot; this works even if the knots became wet and/or super-tight overnight. Note that external frame backpacks being used as bear-bags should always have the knots tied around the frame, not the shoulder straps or suspension loop.

BEAR-BAG SUSPENSION METHODS

Bear-Bag Cables. In many locations, including Philmont and other quasi-wilderness locales, park authorities have installed permanent bear-bag cables at most designated campsites. These cables are made of stainless steel, and are strung between two sturdy trees, anywhere from 12 to 20 feet off the ground. The better versions have 2 - 6 small chocks clamped onto the cable (one every couple of feet), to prevent multiple bear-bag ropes from sliding into each other (and getting tangled into a horrendous mess) or into the trees (where they can be reached by a climbing bear.) In some areas, authorities will use heavy-duty polypropylene or nylon rope tied between two trees as a seasonal or temporary replacement bear-bag cable. Rarely, these latter cables will have a small pulley and secondary rope system built in for suspending bear-bags.

Bear-Bag Poles. In other locations, park authorities have installed permanent bear-bag poles at most designated campsites. These poles are typically 10-12 feet tall, and either have a single side-arm with a hook or four side-arms each with a hook. Most (not all) also have a thinner, 6-8 feet long hooked pole that is used to raise bear bags up for hanging; these raising poles are usually attached to the main pole with a length of chain, to prevent their removal by idiots. These type bear-bag poles are common along the Appalachian Trail. Another type (seen at a few Scout camps) is an even taller pole with a small pulley wheel attached to a side-arm.

Natural Trees -- The "original" bear-bag system. There are two different ways to suspend bear bags from trees; the first (and by far the most common) is to merely suspend the bags from a sturdy limb that's extending roughly horizontally from the trunk and is greater than 4 inches in diameter. In this case, the suspension point should be at least 14 feet high and 4 feet from the tree trunk, such that the bags can be suspended 4 feet below the limb and yet have their bottoms at least 8 feet off the ground. The second method is used in areas where the trees do not have sturdy limbs extending horizontally from the trunk. In these cases, the bags are suspended between two trees, again, with their bottoms at least 8 feet off the ground and a minimum of 4 feet from any tree trunk. This latter method was the primary method used at Philmont through the 1970s, and is still used in the Valle Vidal (where there are no cables or poles).

Bear-Bag Ropes: For small amounts of smellables (less than 50 pounds), 100 feet of any synthetic rope of at least 1/4 inch diameter, in good repair, should be adequate. For larger

quantities, 100 feet of synthetic rope of 5/16ths or 3/8ths inch diameter should be used. When new, the rope should have a breaking strain of at least five times the maximum expected load. Note that most ropes are used doubled for bear-bags, which also doubles their breaking strain; however, older ropes have decreased breaking strains from age, wear, and tear. Cotton or other natural fiber ropes are less desirable, due to their propensity to pick up moisture and rot, which dramatically increases their carry weight and also degrades their breaking strain.

Bear-bags and bear-bag ropes are most conveniently carried inside small stuff sacks with draw strings (old tent-bags work well). These stuff sacks are also very useful as aids for throwing the ropes over the bear-bag cable, rack or tree limb, as detailed below.

HOW TO HANG BEAR-BAGS

Bear-Bag Cables:

STEP ONE is doubling the rope, easy enough.

STEP TWO is getting the doubled rope over the cable -- quite easy for the lower cables, but often difficult for the higher ones. The classic Philmont method is to wrap the throwing end of the doubled cable into a tight "softball," which is then tossed over the cable. Again, this works well for the lower cables, but in my experience rapidly results in frustration with the higher ones. As alluded to above, a much better solution is to tie the bear-bag stuff sack to the end of the rope, fill the bag with something moderately heavy (a pair of sneakers works well), and toss that over the cable. Much easier and much more accurate. Whatever you do, do NOT allow the Scouts to attempt to tie rocks or heavy pieces of wood to the end of the rope for throwing purposes - this will rapidly result in free flying rocks and pieces of wood high in the air above a group of Scouts, a sure-fire recipe for a potentially serious injury, especially at night. When tossing over a cable with chocks, always try to pick a section of cable which is free of other bear-bags; if you miss, it's usually easy enough to flip-curl the rope over a chock to another section. If not, retrieve the rope and try, try, try again.

STEP THREE -- Once you have the cable properly positioned over the cable, remove the throw bag (put it inside one of the bear-bags for safekeeping, or save it for a mini-bear-bag (see below)), and start tying in the bear-bags. Again, the neck of each bear-bag should be tightly twisted, and a lark's head knot placed down over the neck as far down as possible, then tightened. With multiple bags, keep each lark's head knot as close as you can to the previous one, to avoid a lengthy string of bear bags with the middle one hanging too low. Note that the draw-strings of laundry bags or large stuff-sacks should never be used to tie into the bear-bag rope (a typical novice error.)

STEP FOUR is hauling the bags up into the air, which generally takes one person per filled bag. The more people, the easier it is. Note that a common "helping" trick is for one or two people to lift the bags into the air for the initial lift -- which is fine, but these helpers should then immediately get out of the way once the bags are above their heads (another typical novice error.) If you've ever seen 300 pounds of bear-bags take a 15 foot dive and smash on the ground (and yes I have), you'd agree that standing underneath

them is not such a hot idea. In order to prevent twisting in the wind or getting entangled with neighboring bear-bags, the bear-bags should be raised right up against the cable.

STEP FIVE -- The doubled rope is separated into its two strands, and each is tied into “separate” trees, preferably at eye level or above. The ropes are NOT wrapped endlessly around the trees; rather, they are wrapped once or twice, using multiple sticks to protect the tree bark from rope abrasions, then doubled over, and tied back into the suspension rope using two or three half-hitches. The separation of the ropes is a safety measure; bears have been known to chew through bear-bag ropes, dropping the entire bear-bag assembly (the very first bear I ever saw at Philmont attempted to do this to our bear-bags, before we chased him off.)

STEP SIX is to wrap up the remaining tails of both ropes; if left on the ground, they’ll get wet and dirty from being stepped on, and possibly tangled with other Crews’ bear-bag ropes. The ropes can either be coiled or daisy-chained, whichever you prefer, and held in place under one of the strands that is wrapped around the tree.

Bear-Bag Poles - Standard Type: The bags cannot be too heavy or they will be nearly impossible to pick up with the raising pole. Each bag should be handled separately, and (very important!) should be sequentially added on opposite sides in order to avoid having all the weight on one side (which can literally lever the pole out of the ground, or break the pole at the base if it’s rusting out – and yes, the older one often are rusting out). For standard bear bags, take a 3 feet long piece of rope and tie it into a loop, then make a lark’s head knot in the loop to slip over the neck of the bag. Place the free end of the loop on the raising pole hook, and use it to transfer the loop from the raising pole to the main pole. This sounds trivially easy, but a loaded bag can be quite unwieldy, and it can take multiple Scouts and/or adults to get it done.

Pulley Type: Usually there is only a single rope, but a lark’s head knot can still be used, either with one end free (yes it still works), or by tying a bowline to create a loop knot, and making a lark’s head from the loop. Probably the biggest issue with these poles are Scouts who pull the rope all the way through the pulley. In order to prevent this issue (usually after dealing with it multiple times), most camps that have such poles will string them with a continuous loop (i.e., with no free end) that has 1-2 carabiners tied into it for hanging the bear bags.

Trees: Where a good sturdy, horizontal limb with adequate clearances is available, the standard bear-bag cable method can be utilized; be aware, however, that the ropes will not slide over tree bark anywhere near as easily as over a metal cable or pipe. The ropes also tend to damage the tree bark on the top of the limb, but although that’s certainly not ideal it’s acceptable in any area where it’s unlikely that tree will ever be used again.

If no sturdy, horizontal limbs are available, proceed as follows: Find two trees about 25 feet apart which fork about 12-15 feet up (any major branch also works). Tie your bear-bag stuff sack into your doubled rope* and toss it through the first notch (this system also works with a single rope, if you do not have adequate rope to double it). Detach the bag and tie the rope off on a branch as high as you can reach at the base of the same tree - you can also use a nearby tree if no convenient branches are available; however, don’t wander too far, or you’ll use too much rope. Bring the free end of the doubled rope straight down to the base of the tree, and tie in your

bear bags as usual, at the base of the tree, with about equal weights for each separate rope. Retie your stuff sack to the other end of the doubled rope, and toss it over the branch or through the fork of the second tree (the higher notch or branch would be better for the second tree). Using most of your Crew (you'll need them!), haul the bags up as high as you can manage. Use of a good sized, forked branch to prop up the "rope" right next to the bear-bags but opposite the side you're hauling from, will help a lot (do NOT push against the bags, you might poke a hole in them.) When you're done, the bags should be equidistant between the two trees, with the bottoms at least 8 feet off the ground. Higher is better, but is usually difficult to achieve. Tie off the ropes separately, coil or daisy-chain the ropes, and you're done. This is by far the most challenging method for suspending bear bags, but it's the only method that works in some areas.

"Mini-Bear-Bags" (aka "Oops Bags"): No, not bags to protect against the infamous mini-bears; rather, this is a small, secondary bear-bag to suspend forgotten items discovered after you've hauled the primary set(s) of bear-bags up. Not only a mechanism to prevent having to take down and re-raise a heavy set of bear-bags, this is also a means for maintaining your patience with those Scouts (and Adults!) who have somehow managed to miss a dozen calls for smellables. Most commonly, these final items will include things like toothpaste or bedtime medications, or Chapsticks, snacks or trash discovered in pockets when changing into night clothes. **Remember, harshly and publicly criticizing such Scouts and Leaders will only lead to "everyone" hiding those last few items rather than bringing them to your attention.** Unfortunately, they can hide them from you, but not from Mr. Bear. Mini-bear-bags can be small day packs, bear-bag and rope stuff sacks, cook-kit stuff sacks, small trash bags, etc. They can be suspended by any of the standard methods, most commonly off a convenient tree limb near the bear-bag site, using parachute cord. A clever alternative (now used by Philmont) is to clip a small carabiner into your primary bear bags (that is, around the rope and adjacent to the bear-bags), and run about 30 feet of parachute cord through it before raising the bear-bags. Thus, you have an instant mini-bear-bag setup for all late items and/or critical medications - a heck of a lot easier than having to drop your entire set of bear-bags.

Bear-Bag Tangles: Yes, despite every possible effort to untangle lines, every once in a while a set of bear-bags become hopelessly enmeshed (many a bear-bag cable and tree limb have living proof of this, forlornly hanging down from on high.) If this happens to you, and there's no hope of working it out, the only viable solution is to find a lengthy branch, duct tape or lash an open knife to the end, and start sawing. You will eventually get your bags down, although they may not be in such hot shape after doing the high dive act. Better than starving to death, though.... Make sure no-one is standing under the bags when you start cutting (and no-one should ever try to catch a falling set of bear-bags - that's begging for a serious injury.)

Complacency Can Get Someone Mauled or Killed! – Probably the biggest problem faced by Scout Leaders with respect to Bear Safety is Complacency – thinking the problem doesn't exist. Bears are so rarely encountered by Scouts that they tend to think the issue is more mythical than actual. In the most common scenario, a Scout forgets he's got a candy wrapper in his pants and goes to bed either wearing them or having them alongside his sleeping bag or tent. Nothing happens, and he tells everyone all about it. Happens several/multiple times with other Scouts on following nights, and again nothing happens, so obviously it's all nonsense, right? Until the night that it isn't – and then it's a hell of a train-wreck. **Always guard against complacency.**

WHAT TO DO IF CHALLENGED BY A BEAR

As previously noted, the chances of being attacked or even challenged by a black bear in the eastern United States are almost nonexistent. In the Western United States, the level of risk rises all the way up to “remote.” The following section should be read in the bright light of that reality. Black bears should be admired, not feared!

There is an old joke about what bears can do in the woods (“Anything they damn well please!”) The vast majority of black bears are nonaggressive and will not challenge human beings (even when cubs are involved), but yes a few will. However, as previously noted, even these latter bears are (usually) not interested in attacking or eating anyone, but are merely (temporarily) defending cubs, defending turf, or seeing if they can back you off a cache of food.

Hiking or backpacking groups are virtually never confronted by black bears.* However, solos may be, especially if they’re walking quietly enough to surprise a bear. If confronted by a bear while alone on the trail (confrontation meaning they do not turn tail and walk away, but rather hold their ground and stare you down), do not run away! - this will only excite their “chase reflex”* - rather, “break” eye contact, talk at a moderate volume, and slowly back away, always facing the bear, and retreat out of sight. If you cannot find another trail around the confrontation site (bushwhacking is a REALLY BAD IDEA), wait at least 15 minutes before trying the original trail again, and make lots of noise the second time through. If any cubs were involved, wait at least 30 minutes before trying again. A half-hour is a damn long time to wait (try it sometime!), but it’s nothing compared to the rest of your life - WAIT! One extra precaution against a sudden attack when re-trying the original trail is to walk with a large tuft of dry grass in one hand and a Bic lighter in the other, ready to light it up. 99.999% unnecessary, but an ounce of prevention and all that....

[* In the most recent, fatal bear attack that I am aware of (2014), a group of 5 college students (all male) turned and ran from a moderate sized bear in New Jersey, after crowding him to take pictures with their cell phones. The bear chased them, caught one, and killed him. The bear was of course subsequently tracked down and euthanized. This had to be one of the most completely avoidable bear-human tragedies imaginable.]

If a bear invades your campsite, looking for food, you have a number of options. The best is to form a large, amorphous group, with everyone waving arms and clothing and banging pots and pans while slowly advancing towards the bear. The slow approach of such a large, noisy creature is highly intimidating to bears. I have done this at least a dozen times in my life, and in every case the bear quickly retreated. Some writeups also suggest throwing items at or near invading bears, but I would personally recommend reserving this option as a last resort for attacking bears - As 1997’s Boy Scouts versus bears incident in Yosemite demonstrated, it is possible to kill a bear with a rock, and (even when justified) the political fallout from such a death is both extensive and intensive. Another option - one I learned from the back country staff at Philmont - is to immediately chase an invading bear, waving clothing and yelling or barking like a dog. I have done this three times myself, and have also seen it done by staff members at Philmont at least another half-dozen times, all with great success. However, DO NOT close to within 15 feet during your pursuit, and always give the bear an escape route. If a bear has an

open line of retreat available, he'll always take it. A note of warning, however -- if the bear you're chasing is small and starts bawling, break off the pursuit immediately -- you're chasing a cub, mama is coming, and she will be very, very, very unhappy when she arrives. Finally, if all else fails to back a bear off, try using fire -- the smoke from burning off a tuft of dry grass is usually enough to intimidate the most aggressive bears, even a mother with cubs.

WHAT TO DO IF ATTACKED BY A BEAR IN THE OPEN

As noted above, unprovoked attacks by black bears are extraordinarily unusual - so much so that I considered not including this section at all. Nonetheless, it's probably a worthwhile read just for the sake of comprehensiveness for those Troops who do deep wilderness treks in black bear country. Suffice it to say, however, that I have now (2021) encountered over 100 black bears in my lifetime -- some of them at "very" close range (my record is about 4 feet) -- and have not once had a problem with any of them. That's very much worth keeping in mind...

...but what if, right? Well, keeping your wits about you when confronted with 200 - 600 pounds of imminent, violent, painful, and messy death is awfully difficult to do -- but it's vital to surviving a bear attack.

STAY COOL!

Remember, the vast majority of black bear "attacks" are bluffs -- and will come to a screeching halt about 15 feet short of hand-to-paw combat - unless you do something stupid which excites a real attack. Let's review the available options:

Option I -- "Hold Your Ground" -- is the toughest, but by all accounts the most successful technique. As noted above, the vast majority of "attacks" are bluffs. Hold your ground, talk in a normal tone of voice, and wave your arms or pieces of clothing, and slowly back away still facing the bear. Mr. or Mrs. Bear will generally stop well short of an attack (usually about 15 feet away), and then quickly back off.

Option II -- "Running Away" -- is the most obvious, but also the most dangerous and least useful alternative. If you take off running from a charging bear, you will excite his "chase reflex," and likely stimulate a real attack (see the above story from New Jersey). A bear can reach speeds of up to 35 miles per hour, and can easily run down a human being, regardless of the terrain, especially if that human is burdened with a heavy pack. *Allegedly*, the only way to outrun a chasing bear is sideways across a steep slope; their legs are set so wide apart that they have a difficult time keeping their balance while traversing such a slope. Of course, the chances of being attacked on such a slope would appear to be rather remote. Running to an immediately accessible place of safety may be worthwhile, providing you have the time - a vehicle (if it's locked, and you're out of time, get underneath it), a dwelling, an "extremely" dense thicket, a very tight cave entrance or very low hanging, deep-set rock ledge. Reality Check -- How likely are any of these scenarios? In most wilderness areas, climbing trees would appear to be your best option, but this can be a potentially fatal error -- black bears can climb better and faster than any human, and if they really want you, climbing a tree won't help. However, Daniel Boone claimed to have jumped off a cliff into a tree to escape a pursuing bear. Others have jumped into

lakes or rivers; bears can swim just fine, but reports of black bears attacking humans while swimming in deep or fast flowing water are rare. (As a sheer guess, this is likely because they can't effectively use their primary weapons on you -- their front legs (arms.)) One well-known trick which might help if you choose to run is to drop a hat, a bandanna, or some other piece of equipment (BUT NOT YOUR PACK!); a bear may stop to investigate what you dropped, allowing you to make good your escape.

Option III -- "Drop Like a Rock" -- has been successful for many victims of actual bear attacks. However, it's critical to NOT DROP until a charging bear is literally on top of you - if you drop too soon, you may excite an attack just as he was about to give it up. If you drop, you should assume a fetal position, with your arms folded around your head, hands interlocked behind your neck, and knees drawn up to your chest. In many cases, the bear will do nothing more than sniff you, bat you around a little bit, and/or bite you a few times before leaving. In other cases, however, bears have thoroughly mauled individuals who have tried this, severely injuring or killing them. Unfortunately, there doesn't seem to be any rhyme or reason to what triggers an attack in these latter cases. However, all the literature on bear attacks states that if a bear continues to attack you for more than a minute after you've dropped, it's time to fight back with everything you've got left, concentrating on punches or kicks to the eyes and nose regions. [The literature, however, did not specify how you're supposed to time the length of the ongoing attack.] All I can say is, Good Luck!

Option IV -- "Fight It Out" -- has also been successful for many would-be victims of bear attacks. (Of course, the losers are not around to tell their tales!) If you're still upright, you want to do whatever you can to avoid closing to hand-to-paw combat -- because you will rarely win such a fight. Generally, throwing items is the most common method, followed by fending off with a large walking stick or stiff branch (again, directed at the nose and eyes.) Combatants have thrown their backpacks, rocks, pieces of wood, camping gear, and anything else at hand. Screaming, barking like a dog, and/or waving large pieces of clothing with your free hand (again, to make yourself appear larger and more intimidating) have been effective. Others have started grass fires with lighters or matches, or grabbed flaming brands from campfires - this is the most effective method of all, as fire will generally back off even an enraged bear. If you have one, use of one of these new hard-core bear-repellents (mace/red pepper-spray) may also be effective if sprayed into the eyes or nose; however, note that the jury is still very much out on these sprays. Of importance, the residual odor left after using a bear-repellent spray may actually attract other bears to the locale - so you have to leave the area and also treat the just-used can of repellent (and the clothes you were wearing) as potent smellables.

WHAT TO DO IF ATTACKED BY A BEAR WHILE IN A TENT AT NIGHT

If you've been taking care of business, this should never happen; in fact, I cannot find any documented incidents of unprovoked attacks (by black bears) on tenting humans who had taken proper care of their smellables. (The primary purpose of this guide is to teach you the precautions necessary to preclude this very situation!) However, should this ever occur, the standard procedure is to retreat all the way inside your sleeping bag, scream or bark like a dog, and wait for help from your fellow campers. No-one seems to have any suggestions if you don't have any fellow campers to come to your rescue, so this may be a situation for a bear-repellent

spray (assuming you had the foresight to bring one along, and can get to it quickly) or to burn a single dry leaf inside your tent. I would add that using a potent bear repellent spray inside a tent likely wouldn't do you any favors, either, but when you've got no other choice, well then the choice is easy. On the latter option, when I'm camping solo in bear country, I take my Bic lighter and a dry leaf or two to bed. If I am aware of one or more bears wandering around in close proximity to my campsite, I will also pre-burn a leaf or two inside my tent 10 or 15 minutes before going to bed. Finally, note that it is a very bad idea to turn on a flashlight; a sudden light seems to enrage bears, and also gives them a specific target to attack.

Of course, the best way to survive a bear attack of any sort is to never get in one in the first place. With black bears, take care of business and that shouldn't be a problem....

“A FED BEAR IS A DEAD BEAR”

Although most people consider the exclusive focus of “Bear Safety” to be the protection of humans, the reality is that it is also for the protection of the bears. As previously stated, bears are intelligent, crafty and persistent animals - and once they get into a store of human food, they will constantly raid in efforts to get more, usually with at least sporadic success. In some cases, the act itself is fatal - I have heard stories of bears eating massive amounts of dehydrated backpacking food, then rupturing their stomachs - literally exploding - after going to get a big drink to wash it all down. [Some people actually consider this amusing, which makes one wonder which are the real animals.] Other bears die from internal bleeding resulting from devouring trash containing broken glass or sharp-edged lids from cans; this is one of the reasons why bottles and cans are prohibited in many wilderness areas. Large pieces of plastic wrapping (trash bags, ziplocks, food packaging, etc.) or food-stained clothing can cause choking or intestinal blockages. None of these are particularly pleasant ways for any animal to die.

Even if a bear is able to avoid these pitfalls while raiding, he or she is in trouble. Bears who raid quickly lose their fear of humans, and confrontations with and attacks on humans (and pets) become more likely. Bears who are highly successful raiders also degrade their ability to forage for their natural food, and can therefore become desperate when the supply of human food runs out (this is a particular problem with tourist-dependent bears and trash-dump bears.) Note that one of the next items allegedly searched out by hungry, human-dependent bears who cannot find human food - is human underwear, because the smell is close enough. These are the reasons why a raiding bear is considered to be such a hazard.

In the United States, bears who attack humans are almost invariably tracked down and killed; in Canada, the authorities “may” grant a bear a second chance if an attack was the result of a foolish error by the human. In order to prevent the inevitable attack on a human being, bears who constantly hang out near campsites and get into repeated confrontations with humans are either killed or (if they're lucky) trapped, tagged, and transported to a more wild area. However, while the latter option is certainly more humane, it is not particularly successful, as many transported bears will quickly return to their “home turf;” in fact, there are documented cases of bears traveling over 500 miles to return “home.” Most of these bears then resume raiding, and

are then quickly killed. Furthermore, many of those who do not return to their original haunts don't stay purely wild, but rather just migrate to a closer source of human food, and are eventually killed for raiding in their new environments. [Unfortunately, bears do not understand the concept of "This is Your Last Chance."] A sad and entirely preventable end for a once-wild animal - and all the more tragic because its root cause was often nothing more than simple (and preventable) human carelessness.

Therefore, always remember: "***A Fed Bear is a Dead Bear***" (or, to paraphrase a much better known expression: "***Only You Can Prevent Fed Bears***").

- Dr. Bob

[2021 Update of Several Prior Editions]