

## *Clothing & Equipment List*

### **Developing Your Arctic Clothing System:**

If you are heading off on a polar expedition within the next two years, we strongly recommend that you put together and test your own clothing and sleeping system.

Your Arctic clothing must work as a system that wicks away perspiration, insulates you from the cold and protects you from the wind. The most versatile system is made up of layers. This allows you to easily adjust to changes in the weather and changes in your heat output.

**-The first layer** is worn next to your skin. This layer must wick perspiration away from your skin to keep you dry and warm: capilene polyester is excellent, untreated polyester, wick-able polyesters (polypropylene) and the new smart wool are also good. No cotton, as it has poor wicking properties.

**-The second layer** (or layers) provides insulation. This layer retains your body heat. This layer must also wick perspiration away from your body. Pile, polar fleece and synchilla are all great. (From now on they will be called "fleece") as they dry quickly. Wool is not recommended, it is heavy and difficult to dry.

**-The third layer** offers protection from the wind. The more wind proof a garment is, the less breathable it will be. A mountain parka or anorak made of a supplex, ventile or micro fiber is excellent. Most Gortex and waterproof-breathable materials do not breathe in temperature below -20 C.

**-The fourth layer** offers extra insulation and is worn when you are taking a break, repairing a broken binding on the trail or setting up camp. A down or synthetic filled expedition parka and pants are ideal. Pants need full side zips to allow putting them on over boots. These insulating layers are also used if you go for an unplanned swim and must continue to ski in wet clothes.

### **NorthWinds supplies you with the following clothing:**

- 1 pr. double lens goggles with customized nose guard
- 2 neck gaiters (fleece neck tube to protect lower face)
- 1 pr. Expedition Mitts
- anorak (Wintergreen pull-over wind breaker w/ fur trim on hood)
- wind pants
- down expedition parka
- fiberfill over pants with full side zippers
- winter sleeping system: (good to -40° C)
  - \* winter down sleeping bag (-30° C)
  - \* insulated bivi bag or primaloft over bag (adds -10° C)
  - \* vapor barrier liner (keeps moisture from getting into sleeping bag)
  - \* winter sleeping pad system: 1 ridge-rest & therm-a-rest

## **Equipment Supplied by NorthWinds**

- Hilleberg Tents: 4 person Keron
- Pulk (sled) with trace & harness; Acapulka, Fjelpulken, Snowsled, Pairs
- MSR stoves mounted on stove board, pots, & cooking items, and stove fuel
- First Aid kit
- Repair kits
- Navigation: GPS, compass,
- Communication system: 2 Iridium phones

## **YOU NEED TO BRING:**

### **Head**

- 2 hats; must offer insulation, wind protection and cover ears. A fleece with a wind-shell cover is great. Lowe makes a good one.
- 1 pair of goggles or sun glasses that block side light such as glacier glasses or wrap around glasses. Eye protection must block 90% of UV rays.

### **Hands:**

- 2 pr. polypropylene or lightweight polar fleece glove liners
- 2 pr. insulated ski gloves with leather palm that are wind proof & breathable, large enough to wear over glove liners

### **Feet:**

- 2 pr. polypro sock liners
- 2 pr. med. Weight socks
- 2 pr. thick Expedition socks

### **Body:**

- 2 pr. top and bottom (or one-piece) long under-wear
- 1 pr. thick fleece pants
  - 1 pr. medium fleece pants
  - 1 fleece shirt (fleece 100) to wear as second layer over long under-wear
  - 1 fleece pull-over or jacket, (fleece 200) that can be worn over fleece shirt or light weight fiber fill jacket (like the Patagonia puffball pullover)

### **Personal Items:** Bring the minimum that you will need!

- personal toilet kit: tooth brush, small tube of tooth paste, comb, hair elastics for long hair, nail file or nail clippers....etc.
- 2 chap stick (1 for re-supply) recommend Dermetone
- 2 skin cream (1 for re-supply) the dry polar conditions cause skin to crack on hands and flake off body like dandruff
- 1 small sun screen (face is covered most of the time)
- women - tampons
- small personal repair kit for your Therm-a rest, skis...etc.
- small personal first aid kit for blisters, minor aches and pains
- vitamins (optional)

**Other optional items:**

- Note book to keep hand-outs and take notes
- Your own Iridium phone or Sim card for Iridium phone
- Mini disc player (music) & spare batteries
- 2 paperback reading books (1 for re-supply)
- Soft Shell pants or bib pants (with crotch zip)
- Camera, film & spare batteries (lithium batteries last longer in the cold).
- Journal
- 1 pair of camp booties, down or fiber fill
- 1 pair VBL (vapor barrier liner) socks

**Ski System****Boots & Bindings**

Many ski boot & binding systems have been tried, many have failed, none are fail proof. The two systems that have proven the best are as follows.

Option #1 We recommend the custom made Afta Expedition boot with a Meindl inner boot liner. This liner adds ankle support and acts as a vapor barrier so that it is not necessary to dry out your boot liners every night. This boot is best used with a Voile 3 pin w/ cable binding. The weakness in this system is that the binding pin holes in the toe of your boot can pull out if you are not careful to get your boot in right. The solution is to add the cable to the binding. NorthWinds makes a custom made insulated over gator that insures warm feet. (cost \$250)

Option #2 The other system is a soft boot system that uses a Sorel, Baffin Boot, or Acton boot (these are rubber soled with nylon upper and knee high removable liners) with a Berwin binding (a plastic strap on binding). These boots are easy to walk in, but do not offer good ski control or ankle support. The weakness is that the Berwin bindings are notorious for breaking. Solution take: take 4 bindings. Make sure that you get the newer Grey-blue Berwin bindings. We are now testing a new binding that so far has held up in -40° C on a Polar Training. Check out: [www.hummocks.net](http://www.hummocks.net).

**Skis, Skins & Poles**

- Skis: You need a back-country (BC) cross country ski with full metal edges. We can recommend: Fischer Europa 99 or 109, Asnes BC, or Black Diamond Aurora (indestructible but heavy).

- Skins: To pull a heavy pulk you will need ½ ski skins, screwed into the mid section of the base of your ski. No matter what they tell you in the store, skins do not stick in extreme cold.

- Poles: Ski poles must be strong but not heavy, handle straps should be adjustable to fit your large expedition mitts (you may need to modify the straps to make them large enough.) Some prefer adjustable poles like the Black Diamond “Traverse” or “Expedition.” If poles are not adjustable we recommend they be shorter than your standard length as you will be leaning forward when pulling your pulk. NorthWinds used the Swix Expedition ski pole.