

In planning equipment for our polar expedition, we concentrated on lightness and durability. All too often these seem to be mutually exclusive, so the final choices are always based on compromises between different features. The challenge of equipping a skiing expedition that will not have any outside help for a journey of two months is even more daunting. There will be no way to get replacements, so everything will have to last until the end of the trek or lend itself to repair.

Light as a feather but strong as iron

Protecting the peripheral parts of the body is the most difficult problem. Feet are subject to the most strain while skiing, so footwear has to be comfortable, warm and lightweight. Together with Jalas, we developed ski boots appropriate for Arctic conditions. Their light Cordura fabric outer surface ensures comfort and the 13- or 9-millimetre thick Sorel felt liners provide warmth. We wore separate gaiters over our boots; they provided additional warmth and protected buckles and laces from freezing. Each of us had two spare pairs of felt liners. Good ski boots were the only footwear we had with us.

In addition, we had homemade cellular plastic 'slippers' that went over the ski boots. They provided more warmth. We also used them over the felt liners in camp and for swimming across open water.

Protecting the hands against the frigid Arctic conditions was also a challenge. Each of us had thick Marmot mitts and a few pairs of light fleece gloves. Moreover, several of us had thumb-less mitts made from various kinds of material that fit around our ski poles. The amount and kind of protection for the hands is a very individual matter, and each one of us had his own solutions. However, we all agreed that traditional thick woollen mittens offer the best protection for the hands.

We wore three-layer Gore-Tex ski suits. The hood for the shell made by Sasta was sewn to our specification and design. A wide fur ruff kept the Arctic wind off our faces. The thin wind-resistant shell protected the polar explorers and layers of clothing underneath provides warmth. The innermost layer was a suit of Ruskovilla woollen underwear.

Down parkas and pants were part of our wardrobe; they were designed to ward off the cold. The thickest Marmot model was fitted out with a moisture-proof lining ordered especially by us. The liner prevented moisture evaporating from the skin from penetrating the coat's insulation. For the same reason we did not wear our down outfits inside the tent and hence kept as much moisture out as possible. As a result, the down retained its insulating capacity throughout the trek.

We prepared for open water by designing a lightweight dry suit. These were coveralls made of Gore-Tex fabric, sewn carefully with tight seams and extending from the hands to the feet and to the head. We wore the suits for safety purposes when skiing on weak ice and for protection when we had to swim. We had to swim on our backs. There was a risk of taking in water from the neck if you turned over on your stomach.

The neoprene edge of the hood, however, provided protection against splashing. We wore a lot of clothing under these suits, including thick mittens and the felt liners of our ski boots. If you don't have sufficient clothing underneath, you can easily get cold on the ice. In contrast, you usually got hot while swimming in the suit.

Our skis took a lot of knocks in the rubble. We chose steel-edged Fischer Eur99 mountain skis. They stood up to the beating well until the home stretch, when they simply wore out.

The edge broke on a few of the skis, and hence the core was subjected to strain. Despite splints and other repairs, we were forced to break two skis on the last day. After moving the bindings, two men skied to the pole on mini-skis.

The poles were expendable, and we had many pairs with us. In addition to the ready Exel carbon-fibre poles, we also packed eight spare tubes. Ten poles broke during the trek. Almost all of the breakage occurred in rubble and was due to carelessness caused by fatigue or to the poles hitting against the edges of the skis. We also used spare poles to hold up our bear alarm.

Pulkas are among the most important items on a polar expedition. Serious problems arise if one breaks en route. We ordered seven pulkas from the Norwegian Acapulka range, which was designed especially for North Pole expeditions. Despite their large size, the Kevlar pulkas weighed only ten kilograms. Their prows were reinforced to hold a load of 140 kilograms. When full, they were subject to severe strain in pack ice. Thanks to their excellent banana shape and rounded prows, the pulkas sought out a good route amidst the blocks of snow. We also used these big pulkas like good canoes to ferry our things across open water. Unfortunately, one of them cost as much as a small used car.

Our tents were our castles. We made no compromises in choosing them. For the first part of the journey we spent our nights in three Hilleberg Keron tents. These tunnel tents with their large vestibules were an excellent choice. During the day we rolled them up on the pulkas. This meant that they were easy and quick to pitch, even in bad weather. They also had snow flaps and a storm door that can be closed with a cord. We were prepared to use double poles but in the end the winds were moderate and we managed well with singles.

We cooked and melted snow inside the tents on MSR XGK petrol stove. To ensure safety, we developed a stove box that doubled as a transport base. The lid of the aluminium box was an extinguishing blanket that we put on the tent wall while using the stove. The material provided effective protection against fire. There were stationary legs for Kokewilly pan on the bottom of the box.

We ensured the best possible sleep with three sleeping bags, two of which were down-filled and one fibre-filled. We kept one of the down bags packed in plastic and dry up to the halfway point of our journey. We used the fibre and down bags together so that we could adjust the ventilation and temperature as easily as possible and also the accumulation of moisture. We were able to reduce moisture with waterproof VBL bags next to the skin. Despite all our precautions, ice gradually collected in the bags. As we had planned in advance, we burned the most worn bags after five weeks of the trek. ■

