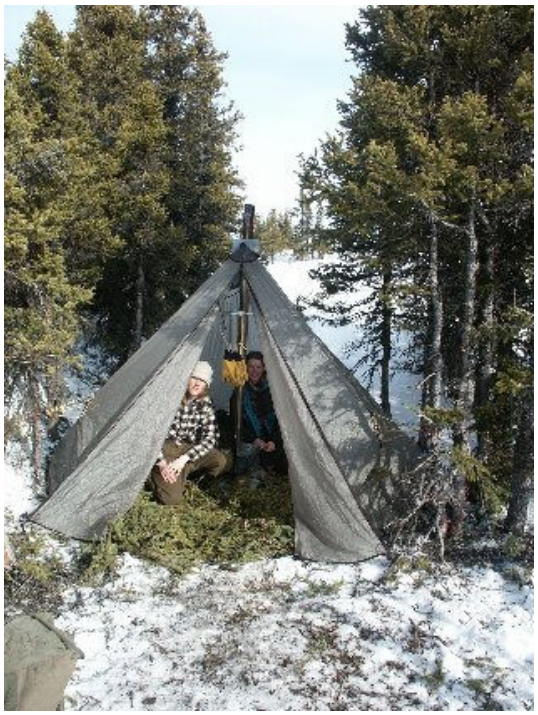
The "Ti-Goat" Tent and Stove
Lightweight Spring Camping in Alaska

By Mark Richards



Happy spring campers in the tent

For over twenty years we've used weighty canvas wall tents and steel stoves and bulky stovepipe for our spring camping needs. So when a friend told me how pleased he was with his lightweight Titanium Goat tipi-tent and stove combo during Alaska fall hunting outings, and that it might be feasible for winter use, I contacted Josh Leavitt at Titanium Goat and ordered a Vertex 6 UL tent and stove to see if it fit the bill.

It did, and I'll never again go back to canvas tents and "regular" stoves and piping for spring camping trips. The entire setup—tent, stakes, center pole, stove and pipe—weighs in at just over six pounds and takes about as much room in the sled as my compressed twenty-below sleeping bag. I am now forever saved from every musher's dreaded conundrum of that pile of gear in the snow next to the sled having to somehow fit *inside* it. (Well, almost.) And I shaved a good 30 pounds off of what I'd normally haul.

The Vertex 6 UL tent is a conical, self-supporting, floorless design made from lightweight 1.1 ounce ripstop nylon. It requires twelve stakes and uses a four-piece carbon-fiber center pole. It has 79 square feet of floor space (enough to sleep three people) with a center height of six feet. I recommend the 15" carbon-fiber snow stakes for winter use. More on that to follow, as different snow conditions require different staking methods.

The stove is made from lightweight yet highly durable (and expensive) titanium and is tiny by stove standards, the firebox measuring 6" high x 7" wide x 10" long when assembled. It will only accept wood under 3" in diameter and comes with either regular, or folding, legs and a snow platform.

The stovepipe prior to assembly

Stove disassembly involves removing ten screws and only takes a few minutes. All the pieces fit nicely together to form a mere one-inch-flat package. The stovepipe is the most ingenious piping I've seen, simply a length of stainless steel sheeting that comes rolled up in a 2" diameter by 12" long package. Unroll it the long way and then roll it the other (short) way and way and you have a 3" diameter stovepipe that is six feet long. It's held in shape by included cable rings that slip over the pipe and form a friction fit. The stove and piping alone are sure to revolutionize the way we heat our shelters on winter and spring outings. Ti-Goat also offers a larger box stove and their new "cylinder" stove.

Rolling the stovepipe into shape

Using the Tent in Alaska

My main concern in using the Ti-Goat tent was the soft, fluffy snow we have here in interior Alaska and how it could be securely staked when not in windblown or mountainous country where there was hardpacked snow. It has to be adequately staked to hold its shape and stand up to any winds.

There are two options in soft-snow conditions. The first is to dig the tent area down to earth and use spikes (in place of stakes) hammered into the frozen ground. The second, which is what we did, is to pack the tent area down first with snowshoes (you could use skis as well) and wait a half-hour for it to set up. We primarily travel in forested country and normally gather spruce boughs for the dogs' beds and to lay inside the tent on top of the snow, so it was no problem to first pack down the tent area, get the dogs situated, then gather boughs. By the time we were finished, the snow was set up hard enough to hold the longer snow stakes securely. In late spring when the snow is glazed hard, as in the following pictures, or in windblown areas, one simply can set the tent up without first packing the snow down.

The tent goes up very quickly after you've practiced the setup procedure. I recommend setting it up outside at home first, as the placement of the first four stakes determines the correct shape of the tent prior to inserting the center pole. Ti-Goat advises "burning in" the stove and pipe prior to field use. The titanium changes color after the first burn, so don't be alarmed with the glorious blue and magenta hues your stove takes on after the initial burn. The stovepipe will retain a "memory" after burning-in that makes it roll into shape easily.

Staking the tent

The tent with stove going—all within fifteen minutes after arrival

Setup time for the tent once you're familiar with the process is only about five minutes, and another five minutes to assemble the stove and stovepipe. The stove comes with a spark arrestor that slips into the bottom of the stovepipe and a slick damper that acts as a junction between stove and pipe. There is a fireproof stovepipe boot sewn into the tent near the apex and it's a simple matter of just slipping the pipe through the boot hole.

Fire up the stove and it gets hot instantly within the tent. Put a pot of water on the stove to boil and the fantastic heat-transfer properties of titanium are quickly evident. Burn time with the stove loaded with dry wood is a half-hour max. Unlike most conventional stoves, the air intake on the Ti-Goat stove is always open, simply a series of circular holes in front of the firebox, but the heat and burn is regulated well by the stovepipe damper. Like most any single-walled tent in winter, once the fire goes out, the temperature inside drops precipitously. I keep a pile of birch bark and

Lounging in the tent

kindling next to the stove for morning and it's only a matter of five minutes after crawling from my bag that I'm basking in the warmth from the stove and hearing the teapot come to a boil.

Concerns and Discussion

I was leery at first of using ripstop nylon in conjunction with a high-temp stove and stovepipe. Josh Leavitt at Titanium Goat was gracious enough to send extra fabric so it could be tested for flammability. In two tests using a piece of dangling fabric right above an open flame, the fabric caught fire and burned for a few seconds and then sputtered out. I tested the material for sparks as well by blowing hot sparks from a burning ember onto the test fabric. As with canvas, it burned tiny holes in the material but never kept burning.

Two attempts were made to test the safety of the tent by flaring the stove and leaving the stovepipe damper wide open. Even with the stovepipe glowing nearly its entire length the fireproof stove-boot material sewn into the apex of the tent didn't allow the heat to transfer to the fabric. Having said that, however, I don't advise ever leaving the stovepipe damper wide open until the pipe glows red-hot near the apex of the tent! The major cause of any fire-related problems will no doubt come from sparks exiting out the top of the pipe, and that's why the included spark arrestor is a must. The people at Titanium Goat have obviously thought all of this out very well.

On the spring trail to the mountains

The tent comes with two options for fabric treatment. The option on most every tent shipped to Alaska (and the one we chose) is "Sil-nylon," a silicone impregnated process that while keeping water out, doesn't let any to escape from inside. The other option is DWR-treated fabric, a "durable water resistant" treatment that allows the tent to withstand

water from without while breathing from within. Condensation was a problem within our Sil-nylon tent, still, the process of warming a shelter to 70+ degrees inside while it's 0 degrees outside will probably cause dew point to be reached somewhere. In our case, it was about one-third of the way up the tent walls. Condensation never dripped off the walls, but it wasn't hard to accidentally lean against the fabric and get a bit of moisture on our shoulders or heads.

I see no way around the condensation issue when being used in colder temps, even with DWR-treated tent fabric. In the mornings there were beads of condensation along the entire inside of the tent walls but after a few minutes with the stove going the condensation dried off and again remained about one-third of the way up the tent.

The only other drawback experienced was a lack of drying lines inside the tent. Ti-Goat is working on some adaptations in this regard. I fashioned a T-bar type drying rack out of a piece of aluminum tubing and a hose clamp that clamps onto the tent pole. A line can also be strung from the sewn-in loop in the peak of tent to a stake near the rear.

Our Vertex 6 UL slept three people (and a dog) but it was a bit cramped.

Manufacturer Information

Titanium Goat is a small two-man operation run by DJ and Josh Leavitt, a father and son team whose wilderness skills and self-sufficiency goes back several generations. The name of the company they started to provide quality lightweight backpacking gear can be traced to the wild goats still found in the Wasatch mountains near their home and the titanium stoves they fashion by hand. They stand behind their products 100% and offer exceptional customer service and superb craftsmanship.

Contact Information:
Titanium Goat
708 7th St.
Ogden, UT 84404
Shop# 1-801-621-7659
Cell# 1-801-645-2635

On the Worldwide Web:
http://www.titaniumgoat.com
Custom orders welcome; ask about availability and pricing of carbon-fiber snow stakes.

Prices: Vertex 6 UL three-person tent and stove/pipe combo: $840 U.S.