

What makes a great Troop Tent?

It's like asking what is the best car. It depends on how and where you are going to use it - most. In scouting, we do a lot of different camping. Weekend camporees, backpacking, canoeing treks, and week-long summer camps are just a few that come to mind. That's why there are so many different types of tent designs. Most Troops can't afford to buy new tents as their activities change, so pick the one that will service your unit best to accommodate your schedule.

Usage:

Tents can be broken down into a few different usage categories. Listed from smallest to largest.

- **Bivy** - Not really a tent, it's more a waterproof cover for a sleeping bag, usually with a hoop or a pole to give a little room for your head to move around. I only mention it because you will see it listed under tents on most retail web sites. It is ultra-ultra-light and very packable.
- **Ultra-light solo** - As the name implies, a small one man ultra-light tent. Used for backcountry or on-trail backpacking, and cross-country biking.
- **Backpacking** - Like above but for two, three and sometimes four persons.
- **Backyard** - Made to be used in the backyard when friends come to sleep over, it can also be used for a light tent at a family campground as well. These tents are generally not as sturdy and don't have the features of a family tent. (Coleman and Wenzel come to mind. \$100 tents.)
- **Family Tents** - Made for family camping (sometimes referred to as car camping) in a camp ground. Heavier, big, durable. Usually comes in sizes from two to 8 persons. (\$280-\$500 price range)
- **Luxury Family Tents** - Large, sturdy, durable tents with extra features like room dividers or screen porches. Usually in sizes from 6 to 12 persons. (Still no real privacy, the Taj Mahal of tenting.)
- **Expedition** - Somewhat sturdier (and heavier) than backpacking and solo tents, intended for backcountry base camps, expeditions and 4-season camping. (\$\$\$\$)

Which one should we choose? Tents come in many shapes and styles like domes, tunnels, wedges (A-frames) and geodesic. Some are freestanding, meaning they can stand on their own using pole and fabric tension without stakes to make them stay up. Others require a couple of poles, guy lines, and stakes for set-up. And it seems that manufacturers are trying to out-do each other with their latest new designs. The main function of the tent is to keep you and your gear safe and dry from the elements, mainly rain, temperature, bugs and wind. Any design that enhances these features is a good design, but for scouts, keeping it easy to setup, durable, wind-resistant and with plenty of usable space is the most important to me.

For Scouts or Leaders with cots, we've found a 10'x10' 2-door Dome Tent is plenty big for two to three cots and personal gear for a week or 3-4 scouts on sleep pads but I'd hate to try backpacking with it at 13 pounds, 6 ounces each. Though if you shared the different parts between your tent mates it wouldn't be as bad. But then, you would still need to find a 10'x10' flat spot to set it up in a wilderness campsite. These bigger tents are best used at a prepared campsite. Great for weekend trailer camping and canoe treks. They offer a lot of head room, enough to stand up in and plenty of ventilation.

Our 6-man Kelty tents have a lot of mesh under the rain fly, light aircraft aluminum poles and two large doors on either end that makes it easier to get out in the middle of the night without stumbling over everybody. Another reason you don't want to pack 'em in like sardines! They also have a mesh loft to store light gear like your uniform shirt, towel or hat and large mesh pockets in each of the corners to store a flashlight or eyeglasses at night. They've lasted us for 12 years of scouts so far, but we're starting to look for replacements.

We've found these dimensions handy as we discussed tent sizes. Most sleeping bags are 28" x 72", then add a 35L backpack is 20"L x 13"W x 7.5"D. Sleeping pads average 72"L x 20 to 24"W, a regular cot is 75"L x 26"W x 16"H, but your gear is stored under them. By allowing 24" to 30" x 84" per scouts you get a size to plan with.

So how big should the tent be? When I was a young scout, my Scoutmaster was a veteran Army Sargent of WWII. The troop had six big 12-man cabin tents so the whole patrol bunked together. He knew from experience, keeping the patrol together would help make us a better patrol. We hiked together, cooked together, worked together and shared the same tent together. If it was storming outside, we dealt with it together, just as when something funny happened, we shared a good laugh together. We laughed a lot!

The other school of thought is to purchase numerous 2- or 3-man tents. 3-person tents (since that usually equates to a 2-scout tent). If you camp in hot, wet weather, ventilation is a must as is a good tent fly. A good fly should go all the way down to the ground around the tent. (Florida rain doesn't fall down, it falls sideways...) You don't want it blowing under the edges of the tent fly and if the fly goes all the way down that's usually a non-issue. You need a sturdy pole system that won't collapse when the wind starts blowing during a thunderstorm (with hurricane force winds that do sometimes sneak up on us in the middle of the night, no matter how clear the Weather Channel said it would be). They need to be light enough to be strapped to a young scout's backpack. Also, if possible you might like a tent that have a vestibule where scouts can leave dirty shoes under cover, but outside their tents and not worry about them getting soaked if a storm rolls in during the night. Don't forget a proper footprint to lay down under the tent to protect the floor.

Dome tents are popular because they are freestanding and roomy, but they tend to be heavier than other designs. Wedges (A-Frames) are usually lightweight but less roomy. Tunnels provide good space for their weight and are generally better in bad weather and winter camping. We had a bunch of Geodesic before our current 10'x10' tents, we found them hard to set sleeping bags and gear into - always just short of the space you wanted to comfortably put another scout in the tent, and just as hard to fold up and get it back in the bag.

SPACE AND WEIGHT: The best way to tell if a tent has enough room is to lie down inside. Most manufacturers measure size by square feet, problem is scouts aren't measured in square feet. For two- and three-person tents, they offer 33 to 40 square feet to work with. Some tents also have a vestibule that gives you extra space for storing backpacks, boots but never any cooking gear or stoves.

When backpacking, it is recommended taking a tent that can be shared with someone. That way you can also share the weight. One Scout carries the tent body while the other carries the footprint, poles, stakes and rain fly. Aim for a tent that weighs no more than three to four pounds per person.

PRICE: The biggest mistake people make when tent shopping is not matching the tent up with their needs. If you're only camping 3 or 4 times a year, go cheaper. Why buy a \$500 tent if a \$100 model will work just fine for what you're doing? Think about it! You can buy five \$100 tents for every one \$500 tent, but unless the boys treat them with care, it doesn't matter how much you spend on them.

The price difference is usually noticeable in the quality and durability. In general, the higher the price tag, the lighter-weight and more durable the tent and its poles will be.

BREATHABILITY: Airflow inside your tent is the key to comfortable sleeping. If you're camping in hot conditions, look for a tent with lots of mesh panels. For rainy conditions, make sure there's plenty of space between the rain fly and the tent. Without proper airflow, you'll roast inside.

Even if a tent is freestanding, it's essential to stake it out or tie it down properly. Nothing worse than watching your tent and gear blow into the lake because of a gust of wind. Staking out the fly also helps ensure enough airflow and avoid pesky leaks and condensation on the inside of your tent.

TRY BEFORE YOU BUY: Make sure you set the tent up in the store and crawl inside. Most stores don't set up all their tents because of space limitations. But insist on setting it up before you buy it. If they won't let you, go to another store. Remind them you plan to buy more than just one. Pitching it in the store will give you a better idea of how easy it is to set up. You can also make sure that no parts are missing.

Tents and Shelters: Selection, Use, Cleaning, Storage

Seasonal Rating

When you shop for a tent, you will often see the tent rated as a 2-season, 3-season or 4-season. What this really means is how sturdy and weather resistant it is. A 4-season tent has to be designed to be stronger to hold the weight of winter snow. Often the 4-season tent will also be "*free standing*", which simply means it doesn't need stakes and ropes to hold it up. This is important because it's a little harder to get stakes to stay in the snow. But that would not be the only reason to get a free-standing tent. If you're going to camp in the mountains where the ground is very rocky, it might be hard to get a stake in the ground. Also, if you plan on camping in sandy soil, you can get extra long "sand stakes", even free-standing tent need stakes to hold it down.

Components:

Rain Fly

As I said before, the main purpose of a tent is to protect you from the elements and help with ventilation. So, an important part of any tent is a rain fly. Some tents have them and some tents don't. You can avoid the need for a rain fly if you plan on putting a tarp up above the tent, but don't think you can put a tarp *on* the tent. Physical contact with the tent material can allow water to seep through. Make sure the tarp is self-supported above the tent. Some of the newer backpacking tents are *single wall*, and are supposed to be perfectly fine with no rain fly. But for most scout or family camping tents, I prefer a rain fly, and the more tent area it covers, the better I like it. I look for a rain fly that comes nearly to the bottom of the tent.

Poles

Tent poles are the strength of a tent. Not only literally, but figuratively as well. The way the poles assemble and attach to the tent can make it very easy, or very difficult, to put up the tent.

Pole can be aluminum or fiberglass (or some other fancy flexible material). Fiberglass poles are flexible, heavier and very effective at adding needed tension to the fabric but after a few years of use, the fiberglass tends to make glass slivers or split in half. Aluminum is generally stronger, more durable and lighter. Either type of pole will use a system where segments will fit together end to end to form the full-length pole. Most manufacturers now use a system called *shock cord*, a stretch chord much like a bungee, to keep segments grouped together while allowing them to be assembled and disassembled quickly.

Tents attach to their poles in many different ways. The most common ways include a sleeve in the tent, through which the poles thread through; and clips which are attached to the tent and clip on to the frame which is formed by the poles. Some tents use a combination of these techniques. The sleeve method reduces stress on the tent because the tension of the frame is spread across a larger area. However, they can be a little more difficult to set up, as threading the poles can be a little tricky. But with a little practice, you should have no problem at all.

Doors, windows, zippers, and screens.

You may think that doors and windows are not all that important in a tent design, but these items contribute in a large way to how the tent can ventilate. We've talked a lot about protection from wind and rain, but consider what the inside of the tent will feel like on a 90-100 degree August evening. Flow through ventilation is very important, as tents seem to gather the heat from the day. Placement of doors windows and roof vents, as well as the ability to adjust the size of the door and window openings can make a tent much more comfortable.

Zippers should be good quality with double pulls (one inside and one outside). Look for tents with two zippers on each door and window. This will allow you to adjust the opening to any desired size and location.

The screens should be a tight mesh. You will see many tents advertise *no-see-um* bug screens. No-see-ums are teenie tiny little (flying teeth) biting buggers. If you're camping in a spot that has them, you'll appreciate this type of screening.

Think function. If you're backpacking with minimalist gear, you're not likely to find a lot of function for a large, free-standing tent that weighs in at 12 pounds. A two-person tent can be a one-person palace or a two-person prison, depending on the weather. How often could you be tent-bound - hours or days? How well do you like your tent partner? Sometimes a three-person tent is a great two-person tent if you like to spread out or if you have a lot of gear. How many doors do you want? Two are really appreciated if you find yourself crawling over your tentmate at three in the morning to answer the call of nature.

Think about height. A tent with a taller ceiling seems larger, and a tent with more vertical walls also seems to have more room to stretch out. Old style A-frame tents have plenty of sleeping space, but when you sit up you can get a face full of nylon if you're off to the side of the centerline. Modern tents have more vertical walls and can make card playing a lot easier.

Ventilation

Tents vary greatly in their ability to circulate air. In the winter, the obvious problem is how to exchange humid, stale air with fresh air while maintaining some heat in the tent. Thing is, most people don't camp in the winter, so the bigger problem is getting as much air exchange as possible while staying dry. Otherwise you have problems with condensation on the inside of the tent. Mountaineering tents have very small vents that limit circulation. They are, for the most part, unsuitable for summer use.

There is no clear way to measure ventilation other than the ol' eyeball method. Take a look at the quantity of mesh and the location. Lots of mesh is good, especially lots of mesh at opposite ends of the tent.

Also pay attention to the fly, the part that covers the main body of the tent. If it sits close to the body, and if the poles are sleeved with solid cloth rather than mesh or clips, it's likely that the tent, though it may have adequate mesh, doesn't have the design or structure to allow the mesh to work.

Three-season Tents:

A three-season tent are generally built for warm climates. These tents are typically capable of withstanding light snow. The basic rule of thumb is that three-season correlates with Spring, Summer, and Autumn. Three-season tents range from around 4 lbs. to 8 lbs. depending on size and will vary depending on materials used in their manufacture.

Four-season Tents:

These are often referred to as all-season tents, but still aren't capable of withstanding extreme conditions and heavier snowfall. Weight ranges from approximately 5lbs to 10lbs.

Mountaineering Tents:

This is really a subcategory of four-season tents. They are designed to withstand harsh winter conditions. Often used specifically for winter camping. You'll notice in some product descriptions the use of phrases like "ideal for mountaineers/ mountaineering". Range in weight from 5-10 lbs. which will vary depending on materials used in their manufacture.

3 and 4 Season Convertible Tents:

These tents are designed for year-round use with the same weather blocking features as the 4 season. The difference is convertible tents have removable ventilation covers for use in warmer months. Slightly heavier than your typical 3 season tent.

TENT CARE:

A tent that is properly cared for can offer years of service.

Proper care of a tent is simple:

As soon as you get your tent home, some recommend that you waterproof all seams with a seam sealer that is recommended by the manufacturer. I know, I know, the tent says it's waterproof and that all the seals have been treated and sealed. Trust me, seal them, if you don't, even a \$1,000 tent will leak.

Practice setting up your tent. Learning to setup your tent should not be done at the campsite with the sun going down or with rain coming down. Most brand new tents don't have their guy lines tied into place yet. Improper setup can cause tents to sag, broken poles, cut guy lines and ripped tents. Know how to set it up.

Don't pack your tent wet. If your tent does get wet and you have to break camp, set it up as soon as you can and let it dry out. Just like a sleeping bag, let your tent hang out after each trip. If your tent does mildew, wash it gently with warm water. For serious cases, we recommend contacting the manufacturer. Don't use detergent or chemicals as this can ruin the tent or neutralize it's waterproofing. A wise person once told me not to touch the inside of your tent. The oils on your skin are slightly corrosive by nature and can affect the waterproofing of your tent.

Emergency Repairs. The greatest invention of man is not sliced bread, it's duct tape. Duct tape can be used for a number of field repairs. Duct tape can be used to patch a small hole on a rainfly or tent. Duct tape can hold a zipper closed if the zipper breaks. A splintered fiberglass pole can be mended by wrapping the splintered section. A pole with a broken shock cord can also be taped together. If you are backpacking, carrying six to twelve feet of duct tape wrapped around one of your water bottles for most field repairs.

Make sure your tent is ventilated. On a cold night, it is tempting to close up all of the windows and flaps of a tent tight but this can cause another problem. As you sleep you sweat and breathe out about a cup of fluid. Four people in a tent can release almost a quart of fluid. When the inside of the tent becomes warmer than the outside air, this moisture can start to condensate on the inside of your tent and make things pretty wet inside by morning. Make sure you have some ventilation point(s) open in your tent to help reduce this condensation.

Use a ground cloth or footprint made for your tent. A ground cloth is simply a basic low cost tarp. We recommend putting your ground cloth under your tent. This helps keep your tent clean and prevents that rock or root you missed from ripping through the floor of your tent. If the tent manufacturer makes a footprint for your tent, it's worth the price and you'll enjoy more dry nights. Make sure any tarp is folded under the tent. If it's outside at all, rain will run between the tent and the tarp, then in to your tent.

Stake down your tent. We have discussed freestanding tents earlier and although freestanding tents don't require you to stake them down, the weather can. A strong enough wind can move a tent, even with occupants in it! If you are setting up your tent on a windy day, put your pack and gear in the tent to help hold it down. And buy replacement metal or Teflon plastic stake from the beginning, those factory-made wire stakes are only good for staking down a mud rug in front of your tent. Nothing worse than returning to camp after a wind blew your tent in the lake because it wasn't staked down enough. Some campsites do not allow metal stakes to be used. (We figure it due to a lawnmower hitting a lost one.) We carry extra-long stakes in the trailer in case we need to set up on sandy soil. Plus, the bright colored plastic is easier to see than metal.

Cleaning

Clean the tent by setting it up and wiping it down with a mild soap (liquid hand soap) and lukewarm water solution. Rinse thoroughly and dry completely. Never use detergent, washing machines or dryers because they can damage the tent's protective coating and seams. After cleaning, be sure the tent is completely dry, especially the heavier, double-stitched areas such as the seams, before storing or mold and mildew are likely to grow.

Clean the tent poles with a soft, dry cloth. This is especially necessary after oceanside camping trips to remove salt spray and sand so the poles don't corrode or stay gritty.

Clean the zippers with a quick dip in water and then dry them off. This is especially important if you've been camping in a location with sand/dirt. If you don't clean the zippers, the sliders will wear out and eventually the teeth will become inoperable. Use an old tooth brush to lightly clean the teeth.

Seam Sealing

We recommend use of a sealer such as Kenyon Seam Sealer 3 or McNett Outdoor SeamGrip. Be sure to check directions on the side of container for specifics before beginning the seam sealing process.

Seam sealing should be done in a fully ventilated area. Set the tent up or lay the tent out flat. Taut seams allow for even application and penetration of the sealer.

Decide which seams need to be sealed. For example, seams that will be exposed to rain, runoff, or ground level water are a must for sealing, while seams on uncoated nylon or mesh panels won't need treatment. You won't need to seal the seams in the roof or the factory taped seams either. We recommend sealing both floor & fly seams and reinforcements.

Apply sealant to the inside and outside of all exposed seams. Draw or brush the sealant along the seam, spreading it evenly and liberally into all of the needle holes. Several thin layers will work better than one thick layer. Allow 30 minutes to 1 hour for the sealant to completely dry before storing the tent. Twelve hours for SeamGrip®.

Ultraviolet

Ultraviolet damage to tent fabric is caused by excessive exposure to sunlight. While most tent fabrics are UV resistant, any synthetic fabric is susceptible to ultraviolet degradation. UV damage will cause nylon and polyester to become brittle and tear easily. Once your tent has UV damage, it is non-repairable, but damage can be minimized by erecting tents on sites where exposure to direct sunlight can be avoided. We also recommend that you use the rain fly even on clear days. It acts as a sunscreen to the tent. A rain fly is both easier and less expensive to replace if damaged.

Color Transfer

Due to the nature of tent fabrics, color can transfer from darker fabric to lighter fabric if two colors are in contact over time when wet, damp, or exposed to the combination of moisture and high heat. This does not effect a tent's performance. To prevent/minimize color transfer from occurring, always make sure that your tent is completely dry prior to packing and storage.

Storage

Make sure the tent is completely dry, then store loosely rolled, in a dry, cool place. To prevent dust from collecting on the tent, cover it with a cloth. This allows the nylon/polyester fabric to breathe. Ideally, the tent poles should be stored in their fully assembled state. This reduces the tension on the shock cord, prolonging its life. We recommend that the tent bag be used only as a carry sack and not for storage.

GENERAL TIPS:

- **Check the area before you place your ground cloth or tent** for small stones, branches, sticks, etc. Kick them out of the way first. That small stone will feel like a boulder after a few hours of sleep and could also damage your tent floor.
- **Check above your tent for dead limbs or loose objects** that may come crashing down in the middle of the night.
- **Use a ground cloth under the tent whenever possible.** Invest in a footprint designed for your tent, or build your own using Tyvek or thicker painter's plastic. Even a thin barrier will extend the life of the tent floor and prevent ground soaking during a heavy rain. In addition, keep DEET-based bug dope away from the tent fabric. Exposure to that solvent will eat away at the nylon's water-proof coating. Ground cloths are easier and less expensive to replace than torn tent floors.

- **Try not to wear shoes inside your tent.** Why track in the dirt and grit. Bring a small rug or mat to put just outside or inside the tent door to wipe off mud and catch sand or grit.
- **Sweep the tent floor daily** to prevent damage from grit, dirt and stones.
- **Do not keep food inside the tent.** Critters love those snacks as much as you do, but they don't know how to work the zipper so they go through the tent and pack material. Keep the all food out of your tent. Field mice, raccoons, and their big brothers – bears are not what you want to wake up to in the middle of the night. Their teeth and claws go right through the tent and backpack cloth. And guess who is going to be expected to pay for the repairs!
- Try to place your tent so your head will be on the uphill side of the tent if the camping location is not level.
- **Do not pull up stakes with the tent body or stake loop.** Use a stake puller or the end of a mallet to remove stubborn stakes. Ripped stake loops can be sewn back into the tent again, but be sure to seam seal the stitching.
- **Remove pine sap.** Scrub off sticky stuff with a sponge soaked in mineral oil, then rinse the spot thoroughly with hot water to remove the residue.
- **Don't forget about lightning and tall objects.** Setup your tent far enough away (15-20 ft.) from tall objects so as to not become a lightning rod during a storm.

Find cheap backpacking gear without sacrificing comfort

By Michael Lanza | Gear, Great Gear, Magazine, Outdoors
Photographs by iStock by Getty Images

My first two-person tent (purchased near the end of the Cretaceous Period) set me back about 80 bucks.

It was a bit heavy and bulky for backpacking, and it flapped so loudly in a stiff breeze that I nicknamed it the Wind Sock. But I used it for six summers of car camping and backpacking, and its cost worked out to about 50 cents a night.

Backpacking on a budget is possible. There's gear out there you can afford — it's just a matter of knowing where to look and how to evaluate quality.

How to Find (Good) Gear Cheap

Lower your standards and be choosy. Even when you can't afford expensive gear, read reviews of it to educate yourself on how to distinguish between junk gear and stuff that won't fall apart on your second trip. The tradeoffs for a lower cost often include heavier gear, mediocre fit and comfort, performance compromises (example: less breathability in a rain jacket) and sometimes durability.

Shop respected brands. Most top name brands offer well-priced gear, like two-person backpacking tents for \$150 to \$199. Be wary of really cheap gear from an unknown brand on Amazon.com or other retail websites; it might not last long.

Wait for regular sales. Online and brick-and-mortar retailers always offer new-gear sales in spring, clearance sales in early fall and sales around major holidays (Memorial Day, Independence Day, Christmas). Score deals ranging from 20 to 75 percent off gear you might not otherwise be able to afford.

Shop discount online retailers. Try *theclymb.com*, *backcountry.com*, *sierratradingpost.com*, *REI.com* (REI Garage) and *steepandcheap.com*. All of these sites offer deep discounts on products that have been discontinued but were cutting-edge just months earlier.



Buy used gear. If you can discern good gear from bad and you're on a general quest for a piece of gear rather than a specific model, buying used stuff on sites like eBay and Craigslist can reap great rewards. Often sellers have used it very little, so the gear might be in like-new condition. Many cities also have gear-consignment stores, where you can find the best bargains on lightly used outdoor gear.

Always start your shopping at scoutstuff.org. The buyers in the BSA's Supply Group work hard to bring Scouts and Scouters quality equipment and top-of-the-line brands at Scout-friendly prices. Plus, all purchases at local Scout shops and on scoutstuff.org help support the future of Scouting.

Bargain New Gear



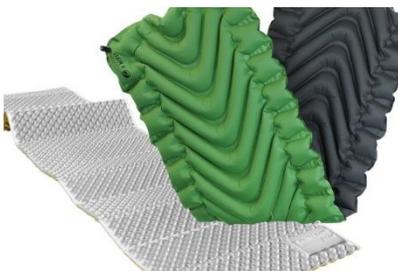
The Alps Mountaineering Taurus 2 — at \$69 to \$90, depending on where you shop — is a freestanding, dome-style backcountry tent with two doors and vestibules. It's heavy (weighing more than 7 pounds), a bit cramped inside and comes with just two crossing poles. But it's built with durable materials, and you'll be hard pressed to find a cheaper tent that can survive multiple backcountry trips.

For a surprisingly low price considering its quality, the **Jansport Katahdin 50L** (\$100) or **Katahdin 70L** (\$130) provides an adjustable harness to fit a range of torso sizes; adequate support, padding and carrying capacity for trips up to three to five days (50L) or four to six days (70L); and features such as abundant pockets and compression you'd find on pricier packs.



When it comes to camp stoves, there are many choices, including affordable options like the **Primus Classic Trail Stove**. At \$20, it fires up reliably; can simmer; has a wide, stable burner for larger pots; and uses any screw-on, isobutane-propane canister (widely available from several brands). But it's worth noting that for an additional \$20, you can grab an **MSR PocketRocket**, which is equally versatile but less than half the Classic's weight.

Unlike traditional down, new-tech down feathers resist moisture, dry quickly and retain their ability to keep you warm once wet. But those bags don't come cheap — except for the **Kelty Cosmic Down 20**, which comes in three different models for around \$150. Besides 600-fill DriDown feathers, the Cosmic has a fully adjustable hood and quilted construction to prevent cold spots. This 20-degree, three-season bag weighs in at less than 3 pounds for the regular length.



When it comes to sleeping on the ground, comfort is a hard sacrifice to make. If you need to pinch pennies, try a foam pad like the **Therm-a-Rest Z Lite Sol** (\$35-\$45). But if you want more comfort (who doesn't?), step up to an air mattress like the **Klymit Static V**. This 2.5-inch-thick mattress will set you back \$55 (much less than the \$150-plus varieties), and it packs down to a mere 18 ounces.

MICHAEL LANZA is author of *Before They're Gone*, and he shares his gear and trip reviews at thebigoutside.com