

How to Survive Fly Fishing

Preparing for Being Lost, Injured, and Other Angling Emergencies

BY KIRSTON KOTHS

HOW MANY OF US heard about the plight of the Kim family, lost on the back roads of Southern Oregon in late 2006, and thought, “Whoa. If that had been *me*, what would I have done?” I asked myself that. Then I wondered how many self-educated “outdoor types” like me would have been prepared to make better decisions than James Kim did.

Going on a fishing trip often means traveling to remote locations where the weather is far less temperate than many of us usually experience. Then we may journey miles from our car or lodge to fish and camp. Doesn't it make sense to spend as much time planning for what might go wrong outdoors as we do ensuring that we have the right flies? But most of us don't. Nor does fly fishing with a commercial outfitter absolve us from the need to plan for emergencies. (If you go bonefishing on Christmas Island, which has no doctors and only one flight out per week, buying medical evacuation insurance would be money well spent.)

Thankfully, you needn't fuss about potential catastrophes every time you go fishing. Just inform yourself about emergency survival in advance and prepare two safety kits: a basic kit for your fishing vest and a supplementary kit for your car. Being prepared actually allows you to relax. The items in the vest survival kit shown in the accompanying picture are discussed in the fishing-trip safety tips that follow. Included with the tips are some real-life examples of what can happen when things go wrong.

Getting There and Back

An hour-by-hour weather forecast (for example, from www.AccuWeather.com) will help you select the safest destination and route. Get river flow rates from such Web sites as www.dreamflows.com/flows-canv.php and choose another river or stay home if the flows are too high. Tell someone who sees you often where you are going, your route, and when you'll return home. Give them the exact location (even the GPS coordinates) of where you will fish and camp.

Carry topographic maps in your car, such as the DeLorme books that show roads and rivers, or buy a GPS-capable cell phone, which has many potentially life-saving features. Even if you don't have cell service in a remote area, dial 911 from a high location when lost or stranded. Pings from the Kim family's phone helped to narrow the search area.

Remember that it is much easier to drive downhill on a dirt road than it is to drive up, especially if it begins to rain or snow. When driving or walking in a maze of unmarked logging roads or trails without a GPS device, make a sketch of which way you turn at each intersection. Note all roads or trails that merge at shallow angles from the side, because these can be confusing on the return trip. If you will be returning at night, bring reflective tape to tie on branches at each intersection. (Remove it as you exit.)

Your vehicle is both a survival tool itself and a way to carry survival items that are too large for a fishing-vest kit. When traveling through remote areas, bring extra oil and water for your vehicle and keep the gas tank as full as possible. Keep water and your phone within reach of the driver's seat. If your car rolls over and off the road, you may be unable to move and forced to depend on what is within arm's length. Carry a piece of rug to place in front of a spinning tire when stuck. When high-centered, jack up the vehicle and place rocks under the tractionless tires. Then check for oil-pan leaks and other damage.

Every year, hundreds of people drown while trapped in their cars. Park your vehicle parallel to the water. Get a Res-Q-Me or similar tool for your key ring. It contains a spring-loaded pin that will break side windows and a knife that quickly cuts seat belts. If you encounter fast-moving water crossing your route, remember the phrase “Turn around, don't drown.”

A car's rearview mirror can be removed to use for signaling and is visible up to 10 miles from the air. Your road flares will work to start a fire. Two space blankets can become emergency sleeping bags for you and a passenger. These waterproof blankets reflect 85 percent of the heat lost from your body. Every fishing vest and every car kit should have a space blanket in it. They are orange for visibility, weigh a mere three ounces, and are only a few inches square.

A headlamp-style flashlight is very handy, but not if it has dead batteries. Check them before you go. Also consider getting the kind of light that you crank by hand, providing illumination for 30 minutes at a time indefinitely. A camper-style Swiss Army Knife or small Leatherman tool will have many uses. Store your car kit emergency items in a small backpack that may fit in the wheel well next to the spare tire. If forced to leave the car, you can take everything with you.

Lost or Stranded

When hiking off-road, select an experienced group leader and stay with your group. (I once took a group pack trip to 10,600 feet to fish for golden trout. One fly fisher, unhappy with the mule, decided to walk out instead of riding, despite protests from the pack train guide. After waiting for several hours at the trailhead, the lone hiker's car-pool buddy went back up on foot in the dark for the rescue. No one was hurt, but it could have ended differently.) Don't leave your survival gear on your pack animal while you fish. A thunderstorm might come up and spook the animal, leaving you stranded without protection.

If you think you are lost, don't panic. Try to remember the last place where you weren't lost. Climb a tree or go to a ridge to get the lay of the land and identify landmarks. If you are fairly certain that you can retrace your steps, leave a note in a large pile

of rocks saying that is what you are doing. Give the direction you are headed and the date/time you set out. Do not wander aimlessly. Walk from landmark to landmark. Walking overland at night can be disorienting and dangerous. Use moonlight and night vision as long as possible before switching on your flashlight. Sometimes the best plan is to stay put and be rescued using the signaling tools in your survival kit. People will start looking for you in the last place you were known to be.

When totally lost and convinced that staying put is hopeless, heading to a lower altitude is sometimes a reasonable idea, because it will often be warmer, roughly one degree Fahrenheit per 200 vertical feet. This is one reason you see snow on Mount Shasta (14,100 feet) as you are heading to the McCloud River (3,800 feet) in 88-degree heat. Lower elevations also are usually less windy. The huge effect of wind chill on the rate of heat loss is often underappreciated. A water-resistant windbreaker with a hood is good insurance. Get one that packs down into its own pocket.

The old advice to follow a creek or river downstream to find civilization is no longer always recommended. James Kim followed a creek, but got wet and cold when it entered a gorge. He might have survived if he had stayed dry and on the

road. Following a river back to your car or camp makes sense, but traveling long distances in the mountains is sometimes easier on nearby ridgelines. A compass can keep you from going in circles, especially if you have a map and know how to orienteer. Remember, the sun rises in the east and sets in the west.

If stranded, use the international distress signal, SOS. Honk your car horn or use your safety kit's whistle to spell out "S-O-S" in Morse code: "short short short, long long long, short short short." Or flash lights in that sequence. Or spell out the letters "S-O-S" at least 20 feet long using rocks or piles of branches in an area of clear ground that is visible from above. (Have your rescuers remove them.)

A lone angler who is seriously incapacitated near a river without any near-term hope of rescue has additional signaling devices available: floating fly boxes. Put a *detailed, dated* message inside each (using the waterproof ink pen and paper in your vest survival kit), and toss them into the river at intervals, preferably when people are likely to be fishing.

If you need to abandon your car in extreme weather without proper clothing, cut open the car seats and stuff the cushioning material into your shirt. A lot of body heat is lost through the head, so car-

ry a hat, even a ski hat, in cool regions. Plastic trash bags can be used to fashion a poncho by cutting holes for the arms and head. Pieces of plastic bag can be used as socks to keep your feet dry inside wet shoes or to keep your head dry inside your hat.

Learn how to build a fire. It becomes your kitchen, heater, light, and rescue signal, not to mention a morale booster. Your portable survival kit should contain waterproof matches and a disposable lighter as a backup. Gather firewood before it gets dark. Have all of your wood ready (in a variety of thicknesses) before you start to light anything. First, build a decent-sized teepee of match-stick-sized twigs that are very dry. Then light it at the bottom in the center and very slowly add twigs of gradually increasing size until you have thick pieces that are burning well. Drag a few fallen trees to the fire and feed them in as they are consumed at their ends. Make clear-burning fires during the night and smoky fires (using pine boughs) during the day. Add the vehicle's spare tire to a daytime fire if you know search teams are nearby. (The Kim family heard a search helicopter, but hadn't kept the fire going and had already used up their tire fuel.)

Learn how to make a simple shelter. Use a tree, boulder, or side of a cliff for a start and make a lean-to out of whatever

you can find. A brush pile can also make an effective shelter. Place moss, evergreens, or leaves between your body and the ground for insulation. Wrap yourself in the survival kit's space blanket. Ideally, your camp should be visible from the air, but not positioned so close to a river that you cannot hear rescuers.

Fishing Safety

Fish with a buddy whenever you can. At Oasis Springs Lodge on Battle Creek one chilly evening, I observed a search-and-rescue team called in to find a solo fisherman who had not returned by 10:00 P.M. The fellow had climbed down to a riverside ledge, only to find he could go neither down nor back up safely. It took an hour to locate the shivering guy. Carrying 25 feet of strong, thin nylon rope and a whistle might have made a difference.

Felt-soled wading boots with studs in them are great stabilizers when wading. For long, rocky hike-ins, however, consider wearing hiking boots, then switch to your wading boots. Carry a wading staff tethered to your wading belt. A wading belt keeps your waders from immediately filling up with water if you fall in.

Learn wading skills. Using your wading staff, always have two points of contact with the ground when wading. Test deeper water with your staff before stepping. Wearing polarized sunglasses helps to see the structure of the river bottom. Watch out for man-made holes in areas where gold dredgers have been working. Don't wade above dangerous areas, no matter *how* big that trout is that you see rising. If wading in a tailwater, watch for water levels rising due to dam releases. The downstream ends of loose gravel bars are great places to end up floating down the river. When fishing on mountain rivers in the spring, be aware that during the day, snowmelt can increase the water depth to the point that you cannot return the way you came.

If you cross a river that has limited places to ford, return well before dark so you can see where you originally stepped to get over. A place where a tall person crosses a river may not be at all safe for a short person. The force of water on your body increases greatly when it gets over your knees. Crossing while holding on to a fellow wader with one hand can be helpful. Start well upstream of your destination and proceed diagonally downstream. Falling in while wading when you're tired at the end of the day is not uncommon.

If you fall into a river and are being carried dangerously downstream, call out for help and toss your rod toward shore so



THE AUTHOR'S FISHING VEST SURVIVAL KIT FITS IN A VEST'S BACK COMPARTMENT. IT INCLUDES (COUNTERCLOCKWISE FROM THE TOP): WATER-RESISTANT WINDBREAKER WITH A HOOD (OR A LARGE GARBAGE BAG), MIRROR, WATERPROOF-INK PEN AND PAPER, ORANGE SPACE BLANKET, TOPO MAP OF THE AREA, COMPASS, ARMY KNIFE, WHISTLE, DISPOSABLE LIGHTER, TWEEZERS, TOILET PAPER IN ZIP-LOC BAG, GPS-CAPABLE CELL PHONE IN A FRESH ZIPLOC BAG, ADHESIVE TAPE AND LARGE BAND-AIDS OR KERLIX BANDAGES, NEOSPORIN ANTIBIOTIC, CELOX COAGULANT POWDER, ANY MEDICATIONS YOU TAKE DAILY, 25 FEET OF THIN NYLON ROPE, TYLENOL/VI-CODIN, COMBINATION WATER-BOTTLE/FILTER, HARD CANDIES AND ENERGY BARS, INSECT REPELLENT, WATERPROOF SUN SCREEN, AND HEADLAMP. NOT PICTURED: MATCHES IN A WATERPROOF CONTAINER.

the line won't entangle you and your arms will be free. Release your wading staff, if it is easy to do. Orient your feet downstream to ward off rocks and snags. Try to go over or around obstacles, rather than allowing your body to be sucked under or pinned against them. Work yourself toward a back eddy where you can safely stand up and walk to shore. Then be alert for the onset of hypothermia. People who appear to have died from drowning should be given cardiopulmonary resuscitation for up to an hour. Cold water can delay death for over 20 minutes.

Learn how to deal with an embedded fish hook. If hooked in the eye, leave it alone and get to a doctor. Hooks that are not too deep in the skin can often be removed by pressing on the side of the hook shank while backing the point out along its path of entry. For hooks that cannot be removed because of a barb, the point of the barbed hook can sometimes safely be pushed all the way around and back through the surface. (Do not attempt this where blood vessels or tendons are visible.)

A tool with a wire cutter can then cut the barbed point off the hook, or you can pinch the barb down with a hemostat. Then back the hook out as described above. Better yet, fish with barbless hooks and always wear a hat and glasses.

If you float tube on lakes, get off the water at the first sign of steadily increasing wind. In a pontoon boat, you can row and kick simultaneously, but don't get overconfident. Leave when the locals leave. One fellow fishing Pyramid Lake in the high desert of Nevada got blown some five miles across the lake at the day's end. Rescuers found him shivering under his float tube on the shore the next day, quite hypothermic. In recent years, striper fishermen in the Delta and on San Luis Reservoir have drowned when winds came up and swamped their boats before they could reach shore.

In rare situations, float tubes can invert and drown you, particularly the "donut" kind. This happened on Lake Crowley just a few years ago when a father drowned within sight of his son after los-

ing consciousness due to a heart condition. The U-tube and pontoon boat designs that allow you to exit forward are safer. Don't kick across large lakes to get to the other side. Fish around the perimeter.

Walk backward when you have flippers on to avoid falling. Attach flippers to your ankles with a safety lanyard so they don't get lost if they fall off. You can't go anywhere fast with just one flipper.

Lightning in the United States causes over 80 deaths per year. Graphite fly rods make good targets, especially on a lake. When a thunderstorm threatens, get off the water and away from your rod and tall trees. Squat in a dry depression or sit in your car, which protects you.

If you fish from a floating craft or on foot in the surf zone, wear a personal floatation device, such as inflatable suspenders or a thin kayaker's life jacket that does not restrict casting. Never fish alone in the surf zone. Logs can come in, hidden in waves, and knock you silly. Driftwood can also roll back down the beach with receding waves. Watch out for the deep

holes that waves create around boulders. Never, ever, turn your back on the sea, or a rogue wave may drag you in. If you are about to be hit by a huge wave, turn sideways and lean into it. Swim parallel to the beach to escape rip tides. Think carefully before jumping in to save someone. It may be safer to cut off your leader and cast your fly line to the person.

When drifting rivers, beware of sweeper logs that jut out from the bank and can bump you out of your craft. If current carries your craft into logjams or "strainers," particularly on turns in the river, you can end up under logs or branches, unable to get to the surface.

Lakes, bays, and rivers can all accumulate deposits of leg-grabbing muck known as quicksand. The McGee arm of Lake Crowley has a number of such areas that are marked on local maps. Nonetheless, I managed to get my flippers trapped in quicksand there for 20 minutes once, leaving me exhausted and wondering if my right femur was still connected to my knee. If no one is around to pull you out

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Snakes, Animals, and Insects

Water attracts rattlesnakes during the summer. Of the approximately seven thousand poisonous snakebites in the United States each year, only about ten are fatal. Nonetheless, an untreated rattler bite can incapacitate you and may result in liquefaction of much tissue at the site of the bite. When scrambling along a riverbank, do not place your hands on rocks above your head without first looking for snakes. Also, do not step *over* midsized rocks and logs. Step *on* them, so you won't step on a snake. Remove rings if bitten on the hand, because it will swell. If you can't get to medical help within 30 minutes, place a constriction above and below the bite loose enough to slip a finger under. Do not use a tourniquet and do not make cuts over the bite. *Do* try to suck out as much venom as possible immediately. Memorize the appearance and size of any snake that bites you, so the proper antivenom can be administered.

In North America, about thirty people experience serious attacks by bears each year, and about three people are attacked by mountain lions. You are 10 times more likely to be severely hurt by a neighbor's dog. To minimize encounters, store food and scented products properly, hung high over a thin tree limb or stored in bearproof containers away from your tent. Maintain a clean camp. Almost 80 percent of bear attacks occur when people walk between a bear and its cubs. “Grizzly Man” (featured in the documentary film by Werner Herzog) and his girlfriend were killed in Alaska in 2003 by a grizzly, probably because they camped next to a salmon run frequented by bears. In close encounters with a bear, appear large, but calm and unthreatening. Slowly back away, tossing a hat in front of you for the bear to inspect. In grizzly country, carry an approved “bear spray,” but use it as a last resort. If attacked by a grizzly, roll into a ball, protecting your face and neck with your arms. If attacked by a mountain lion or a black bear, *do not* roll into a ball or even crouch, or you may look like edible prey. If attacked, fight back, targeting nose, eyes, and testicles. Making noise and wearing a “bear bell” will cause most bears and cougars to vanish long before you ever see them.

Some small insects can cause serious harm. Lyme Disease, a potentially debilitating condition, can result from the bite of a tick no larger than the head of a pin. Do a tick check after hiking and remove

ticks by pulling gently on their *heads* using tweezers. Save the tick for later identification. Insect repellents containing DEET will discourage ticks as well as disease-carrying mosquitoes. If you are allergic to bee stings, don't forget your EpiPen to counteract anaphylactic shock. To avoid spider bites and scorpion stings, shake out your sleeping bag, clothes, and shoes before you use them. Stings can cause fever, nausea, and scarring, but very rarely death.

Extreme Conditions

Relatively brief exposure to the sun at high elevations or in the tropics can cause trip-ending blisters and increases the risk of getting skin cancer. Every few hours, apply a waterproof sunscreen with an SPF of at least 30. Use a lip balm containing sunscreen. In the tropics, wear thin, sun-blocking gloves, long-sleeved shirts, and a safari-style hat with ear and neck protection.

Hyperthermia (overheating) can become a medical emergency. When the air temperature is above 92 degrees Fahrenheit, convective heat loss from the body effectively ceases, and cooling relies on the heat dissipated by evaporating body water. To avoid heat stroke, a person hiking uphill in 100-degree heat might have to drink two liters of water per hour to make up for losses. For long hikes in high heat, a hiker cannot physically carry enough water to avoid dehydration. If you become lost while wearing waders, take them off to hike out in the summer, but save them in case you need them to avoid getting wet or to sleep in. Hiking any distance in neoprene waders, even on moderately warm days, is asking for trouble. If you become lost on a hot summer day and with limited water, wait in the shade until it is cool enough to walk. Don't sit on the ground, which can be 20 to 30 degrees warmer than the air. Do not ration your water too cautiously. Become inactive and ration your sweating, instead.

A person experiencing heat stroke can become delirious and eventually perish. Sweating ceases in an effort by the body to conserve water. Cooling the victim is the first concern. Give liquids later, and only if the person is capable of swallowing without vomiting.

More deaths occur from running out of water than from running out of food. People sometimes can live two weeks without food, but often only days without water. Temperature, wind, and the level of exertion all affect the rate of dehydration. Dehydration can occur remarkably fast, even in the winter.

Water is occasionally contaminated with *Giardia*, an organism that can later

make you so sick you may wish you hadn't been rescued. Boiling water for 10 minutes will sterilize it. Instead of carrying a bulky water filter, carry a water bottle with a filter built into its cap. Simply fill it with water and drink through the filter cap.

Hypothermia (chilling) can also become a medical emergency and can lead to heart failure. Falling into water cooler than 70 degrees Fahrenheit can eventually cause hypothermia because water removes heat from your body 25 times faster than air. If forced to wait in a life jacket for rescue after falling into a lake or the ocean, you can slow this water-mediated heat loss by holding your knees to your chin. After falling into a river and getting out, remember that wet clothing greatly accelerates heat loss. In many situations, the conductive/evaporative cooling of a wet cotton shirt can be colder than no shirt at all. When someone is shivering and you suspect they are becoming hypothermic, perform these tests: If they cannot touch their little finger to their thumb or walk 30 feet in a straight line, they're hypothermic (though they often will deny it). Replace wet clothes with dry ones, being sure to cover the head and neck. Build a fire and warm the core temperature before the extremities by giving warm liquids (no alcohol). In serious cases, strip a chilled victim and put the person in a dry sleeping bag. The body will rewarm itself if that is done. If the bag is large enough, adding a naked warm person will help.

Choose your clothing carefully and dress in layers. Even sweat can contribute to hypothermia, so buy breathable Gore-Tex-style gear. Undergarments made of fabrics such as polypropylene wick moisture away from your skin, keeping you relatively dry.

Frostbitten extremities should be warmed slowly, frozen extremities probably not at all, in the field. (My son's twentysomething buddy lost all his toes when his feet got wet and frozen while hiking out of an early snowstorm in the Appalachians. His friends, who waited for rescue, stayed dry and saved all of their toes.)

Injuries from Falling

The most likely serious injury that might happen while fishing is a gash, incapacitating sprain, or broken/dislocated bone as a result of falling. Over two hundred search-and-rescue operations occur in Yosemite each year, many for hikers with broken ankles. If you sprain an ankle, leave your boot on for the trip out, or the foot will swell, preventing you from putting the boot back on. Use your wading staff wherever you go, even on trails. On

trails, hold your staff in the hand closest to the river, the direction in which you are most likely to fall.

If you have a serious fall, take Tylenol or Vicodin to block the pain — not aspirin, which promotes bleeding. For many cuts, direct pressure for 5 to 10 minutes may stop the bleeding. A half-ounce packet of an impressive new FDA-approved coagulant powder, Celox, can control moderate to severe bleeding. Loss of more than three pints of blood results in collapse and possibly death. Your hemostat will stop arterial (pulsing) bleeding that is life threatening, but you must avoid clamping nearby nerves. Do not apply bandages until all bleeding has stopped, especially with head wounds. Remove dirt from wounds using clean water and a little camp soap. If the skin is not broken, immerse the injured area in cold river water for 20 minutes to minimize swelling.

If you break a bone or dislocate a joint, be very cautious about trying to reset it. Instead, immobilize the area to avoid causing additional injury. Serious incapacitating injuries in very remote locations dictate that the victim should be given first aid, immobilized, moved to an open location visible from the air, and evacuated. Persons with severe back or neck injuries should be moved only by experienced rescue personnel.

To immobilize an injured finger, tape it to an adjoining one. For broken extremities, stabilize the injured area as well as the joints above and below the break. Make a splint using thick branches (or the butt section of your fly rod) and the adhesive tape in your fishing vest's survival kit. You *do* have a vest survival kit, don't you?

Some Final Thoughts

Despite all of the concerns listed above, fly fishing is a fairly safe sport, as sports go. This is especially true if you are careful to match your destination and fishing/hiking activity with your physical abilities. Being prepared for emergencies will ensure the best possible outcome if bad luck should ever strike. You might even want to carry a copy of this article in your emergency kit. (Kind of like carrying an umbrella to keep it from raining.) Safe fishing, everyone!

Note: This article is only an outline for survival preparedness, intended to initiate education on the subject. The reader should consult other publications, such as *The SAS Survival Handbook: How to Survive in the Wild, in any Climate, on Land or at Sea*, by John Weisman (New York: Collins, 2004) and first-aid manuals for more complete discussions. 