

WEB EDITION

Vol. 37 Mar./April. 2004 No.2

RESCUE

**IDAHO MOUNTAIN SEARCH
AND RESCUE UNIT, INC
BOISE, IDAHO**

IN THIS ISSUE:

- Helicopter Safety Training -p. 1**
- Vehicle in River -p. 6**
- Water Disinfection Update -p. 9**
- Snowmobile Training in Elmore County -p. 13**

FOUNDING MEMBER:
**MOUNTAIN RESCUE
ASSOCIATION**



HELICOPTER SAFETY TRAINING, MARCH 9 AND 13, 2004 --CHRIS HARRY AND ERIC ZUBER



Training started on Tuesday evening, and that session was mandatory in order to participate in the field exercise on Saturday. Needless to say, the turnout was great. Participants learned about proper procedures for loading/unloading/signaling/communications/limitations and basic operations of helicopters, and how we fit in and utilize these wonderful tools. Air St. Luke's was kind enough to present us with material relating to helicopters and their particular model. Following that, Dave Henry presented basics of helicopter flight, safety and a few clips of what can go wrong and how fast you can't react if ever caught in an unfortunate situation (and what to do after you realize you're in one.) Dave later led us out onto the tarmac to inspect one of the Blackhawks. We were again given an overview of the bird and again shown the dangerous areas to avoid. We then passed around Dave's helmet to get a sample

RESCUE is published bi-monthly by the IDAHO MOUNTAIN SEARCH AND RESCUE UNIT, INC.
2519 Federal Way, Boise ID 83705. Editor: Charlotte Gunn, Phone (208) 378-7787 or e-mail
cpgunn@cablone.net Visit our unit web site at www.imsaru.org



Early birds on the flight line.

of night vision goggles—reinforcing that you don't ever want to shine your lights at a helicopter, especially if that helicopter isn't using a white light to search for you and/or the Landing Zone.

The Saturday that wouldn't come: It may have been the longest Tuesday-Saturday stretch I have ever endured, but it finally arrived. Not surprisingly, many of the participants arrived at Gowen Field at least half an hour before the scheduled time. We assembled, were briefed on our flight path and mock mission to locate an overdue dirt bike rider, and headed out to the tarmac once more. The first group—more than half the people—loaded into the Blackhawks cold. One mellow flight was planned for the two K9 teams and others accompanying them, while the other Blackhawk promised a rougher ride (complimentary barf bags provided.) The remaining personnel watched as the Blackhawks disappeared toward Lucky Peak. The second shift loaded the helicopters hot. With only four of us per chopper, we were all able to get



Suzanne gets some guidance on helicopter guidance.



Dog teams disembark at search scene.

good seats by the windows and an unexpectedly detailed view and aroma of freshly buzzed sagebrush on the steep walls of Blacks Creek Canyon.

The view approaching Lucky Peak Dam was great. Then I noticed the sagebrush on the opposite side of the helicopter. It was close. I stretched my neck to look

over my seat toward the nose of the aircraft...more sagebrush. I knew we had to move fast to avoid whatever hill or ridge lay in front of us, and we did. Vertigo set in for a moment as I looked from side window to side window to see where we were. Streaks of green brush blurred my view of the

hill we were skimming as my weight doubled and then halved within split seconds. Occasionally one of the pilots would turn around in response to our yelps, to see if everyone was okay, and we reassured her that we were fine. Upon arrival at our mock-mission PLS, we followed our crew chief's signals to exit and joined the rest of our group.



Team Provides aid and packages subject for air evacuation.

Before we could finish conversing over our ride, we were assigned to groups for the search. Two teams with tracking/trailing dogs set out to pick up the subject's trail. While the K9 teams were starting, our remaining crew selected a helicopter LZ and practiced setting it up, to be used later by Air St. Luke's. Within half an hour, the remaining four teams of three people each set up a search pattern to sweep areas north



Look, no tail rotor! Air St. Luke's staff gives an orientation to their MD900.

and south of where the canines had indicated a possible track. This was a great training mission for first-timers where we had to communicate with the Operations Leader and other teams. We transmitted headings and coordinates so each group could be accounted for and the search could be well managed. Team 5 was asked to check out some coordinates that later led to finding the subject. A Blackhawk was called in, picked up a medevac team at the PLS and was guided to the site by Team 5. The subject was treated, packaged and flown back to the PLS. Mission complete—and we took a lunch break.

Dave H. then informed us that for some unknown reason he had shot his friend and she was lying out in the desert. The second search was somewhat thwarted by our very friendly Crew Chief informing us of some orange gear that someone might have left near a road not far from the previous PLS. This was Janine, our gunshot subject, waiting to be found and treated for a medical scenario. With the position given away, it was decided to go di-



Everett says it is like riding in a convertible with the top down.

rectly to the subject, treat and package her, and have St. Luke's pick her up. However, having been spotted during our first search, our subject changed locations and the search was on. It was soon decided to have St. Luke's make a quick pass or two of the area; within a minute, St. Luke's landed near our subject. We were able to practice treating her several times, packaged her up and loaded her into the helicopter. Marc grabbed shotgun and Dave R. loaded the helicopter, leaving the flight nurse to carry his pack back to the LZ (completely by choice, so the story goes!)



Warm enough to open the doors for the trip home. Spring must be near.

Gathering around our O.L., Chris, we debriefed the missions, identified areas for improvement and heard some constructive suggestions from mentor Jerry. On our way home, we flew direct to Gowen Field with side doors open to experience the wind in our faces and to get a more panoramic view. Within the next couple of weeks, many of the participants will be showing off some of their hundreds of photos and hours of video.

Eric: Having joined only about three months ago, this was my first field exercise and I was cunningly tricked by our O.L. into writing about it. Before this training I personally had been very pleased with IMSARU's professionalism and training, and the teamwork we demonstrated during these mock missions was inspiring. My sincere appreciation and thanks to all who made this training mission a memorable success, including the Idaho Army National Guard and its personnel, Dave Henry who set up the training, Air St. Luke's, and the IMSARU members.

Chris—Lessons Learned:

1. **STAY AWAY FROM THE L.Z.** At one point, the chopper had to be waved off from landing because people were in the L.Z. When Air St. Luke's came in to drop off the second patient, it was difficult to determine who was the ground guide because too many people were standing directly behind her.
2. Remember to do voice checks. The first patient was "responsive" but the teams had quit shouting for him before they got close.
3. Think carefully about using multiple dogs in a small area, and consult with the handlers as to whether the dogs may distract each other.

IMSARU members who participated were Tony Barrett, Marc Buursink, Richard Clements, Jim Cooper, Todd Culley, Chris Harry, Dave Henry, Lina Hensley, Trenton Ivey, Linda Kearney, Tom Kearney, Karen Limani, Dominick Merrell, Jeff Munn, Jerry Newland, Phil O'Bryan, Dave Ritzenthaler, Sabrina Scheri, Janine Townsend, Martha Vandivort with Angie, Suzanne Ventura with Schatz, Tom Wheless, Everett Wood and Eric Zuber.

VEHICLE IN RIVER – MARCH 29, 2004 --CHARLOTTE GUNN

Passersby on the road along the Middle Fork of the Boise River above Troutdale called Elmore County about a vehicle accident. Since that's right on the county line and Elmore County SAR was not immediately available, Jim Noland passed the call on to us. First report said one person was on the road and a second person was stranded on the far side of the river. Our pagers went off shortly after 7 a.m., and we started our teams as members arrived at the Compound. Information soon changed to say that the person on the far side of the river was now on the road side, then that Atlanta QRU was transporting him—but the person originally thought to be on the roadside was now missing. Communications to and from this area are extremely limited. Jim decided to activate the Elmore County SAR also, in case we needed to search the river.

Bits and pieces of the story, some firsthand and some relayed through others (and reliability not guaranteed), fit together something like this: Sometime Sunday evening or night, a truck went off the road into the river. The driver escaped to the roadside; the passenger escaped to the other side, where he was uninjured but wet and cold. The two shouted back and forth to each other. The passenger said he was too cold to survive without help and the driver then walked down the road to look for aid. At some point after this, the passenger decided to swim across the river, even though he "doesn't know how to swim." After nearly drowning, he was "swept by the current to the shore." Both men were picked up, largely through the efforts of two Atlanta Highway District employees working in the area, before our teams reached the LKP, and we eventually got word to our people to return to town.

IMSARU members responding included Karen Limani, Ron Moomey, Jerry Newland (O.L.), Kris Scovel, Dan Scovel, Martha Vandivort and Mark Westerdoll.

HARLEM COMEDY ALL-STARS BASKETBALL RETURNS TO BOISE MAY 21, 2004

Those who attended the game last year laughed all evening, as IMSARU's members and friends learned how to play the game from real experts. The same organization is setting up this year's game, and we hope even more people will attend this year for both the entertainment and to help us meet our financial needs.

Yes, this is put on by a telemarketing organization. Unfortunately, this legitimate sale of tickets follows closely on the heels of someone who was using our name without our knowledge to ask for money; we fear that the earlier scam may have both taken money intended to help Search and Rescue...and made local people suspicious of anyone who now asks. (The same callers were working all across the state, using names of various local SAR groups.) If anyone mentions these solicitation calls to you, please tell them that the current sale of tickets for the basketball game on May 21 is legitimate and that it is the only general solicitation activity done for us all year. The remainder of our budget is from fundraisers that we do ourselves (selling corn at the Western Idaho Fair, wrapping Christmas gifts at R.E.I., manning the Trout Pond at the spring Outdoor Sports Show at the Fairgrounds, etc.), donations, dues, and some reimbursement of direct expenses for search and rescue missions from the state's SAR fund. We are an all-volunteer, non-profit 501(c)(3) corporation, and we value our good name and the good will of our community.

R.E.I. GIFT WRAPPING – CHRISTMAS 2003 --SUE BRIAN AND PAM GREEN

Thanks to everyone who participated in this past Christmas R.E.I./IMSARU gift wrapping program. It was a very good project for us, and we thank R.E.I. and their great staff for yet another year. Special thanks to Sylvia Cooper, Special Events Coordinator for R.E.I., and to Chel, the R.E.I. Manager. They had some splendid ideas which we implemented and which gained positive feedback, e.g. the on-going SAR videos and the coloring books for kids.

Among IMSARU workers, we especially appreciate Jane Foreman, Charlotte Gunn, George Gunn and Susan Read for "performance above and beyond the call of duty." These people chipped in to cover when someone could not be there (as yours truly could not on the first day) and as extras when we were especially busy. We also thank those who helped with the bow-making weeks in advance, including Rose Wood, Susan and Terry Read, Pam and Troy Green, Sue and Lance Brian, Charlotte Gunn, and all of the "guys" who stayed late after one Tuesday meeting to cut florist wire and make bows. And yes, we also needed and appreciate all of the rest of you who worked shifts during the thirteen days we were on duty. In fact, we appreciate you so much that you won't be surprised when we call on you again next year.

THANK YOU!

The following people and organizations have made donations to IMSARU. We very much appreciate this support.

Deloris and Stan Mock of Financial Planning Services, LLC, donated a Canon NP-6650 copier to help us with our printing.

THANK YOU cont.

Hewlett-Packard, with the participation of individual employees, donated a desktop computer and a printer. Former IMSARU member David Anjelkovich arranged the large-format printer, specifically for printing maps for field use. Two IMSARU members who prefer not to be named arranged the new desktop to be used for in-town coordination of missions and other office procedures.

ANNUAL TROUT POND ADVENTURE, MARCH 4-7, 2004

--LINDA KEARNEY

This year's Trout Pond fundraiser at the Spring Sports Show was a grand success. Suzanne did a great job of organizing it and it amazes me how many of our volunteers give up what precious free time people have nowadays in order to do a fundraiser. I have to admit that the thought of handling a slimy fish to take a hook out of it did not thrill me. (I have been blessed with a spouse who always did that for me.) But what are you going to do when a child pulls his first fish out of the pond—almost hits you in the head with it—and then the mom is looking at you with the “now what do I do with it?” look. You move in, pick it up, take the hook out, and ask if they want to throw it back or put it in a bag. After the first one, the rest were easy.

All the children had that look of amazement in their eyes at the fish in the pond. The questions we were asked about the overgrown goldfish! I told people the same thing I was told...that they were golden trout, but I qualified the statement by also saying I just might be telling a whopper of a fish story. I found it heartlifting to watch the parents and children doing this together...the tenderness of the fathers working with their daughters, the moms stifling the urge to say “Ugh” as sons held up their trophies, the countless times grandfathers would bring grandchildren back through to do it again after time had run out before.

But two of the children will always stay in my thoughts. The first was an autistic child and her caregiver. The patience it takes to work with autism! The boy who stood next to her would let her help him and touch a fish he had hooked. But the look on her face when she caught a fish, turned and gave me a hug cannot be described. The second memorable child was a boy of about six. His father was on the other side of the pond with a younger brother. This boy caught a fish, removed the hook by himself, looked around, and stuffed the fish in his pocket. What a surprise his mom must have had when she emptied out his pockets to do the laundry!

Many thanks to Spectra Productions for setting up the trout pond, supplying equipment and giving us the chance to run it; to Channel 7 for their sponsorship; and to Nelson's RV for supplying a private retreat where we could warm up and also store our equipment. Those who worked for IMSARU included Brad Acker, Kit Brown, Marc Buursink, Megan Campbell, Jessi Critser, Pam Green, Charlotte Gunn, Dave Henry, Lena Hensley, Chris Karnes, Linda Kearney, Tom Kearney, Karen Limani, Dominick Merrell, Ron Moomey, Bobbie Munger, Roger Munger, Leni Sue Puckett, David Ritzenthaler, Leslie Robertson, Susan Read, Terry Read, Phil Sander, Martha Vandivort and Suzanne Ventura.

WATER DISINFECTION UPDATE: MIXED OXIDANTS

--KEITH CONOVER, M.D., FACEP

Printed By Permission

One of the major problems in disasters (or backcountry hiking, or wilderness search and rescue) is the bacteriological purification of water (“disinfection”). Yes, water can be contaminated with poisons such as pesticides or other chemical agents, or heavy metals from mine drainage. But the big problem is disease-causing microbes. There are many different ways to disinfect water, including boiling, the old chlorine tablets (which didn’t kill *entamoeba histolytica* very well), iodine tablets, and more recently, filters to eliminate *Giardia* (which just isn’t that big of a problem in my mind), and micropore filters with a smaller orifice size to eliminate bacteria, with or without an iodine resin to kill viruses. Some filters include an activated charcoal filter to eliminate any iodine taste, which as a side benefit also tends to eliminate some toxins.

Until recently, I kept a standard iodine-resin backpacking filter with my DMAT (Disaster Medical Assistance Team) gear. (DMAT responses are a lot like backcountry backpacking, so some backpacking and climbing gear works its way into my DMAT pack.) This technology provided a high level of disinfection without leaving much iodine residue in the water. Iodine in the water tastes bad and can cause problems for those with thyroid problems, which is why I’ve come to reserve iodine tablets as a backup. Though a filter can easily provide disinfected water for a few people, it’s simply not fast enough for any larger group of people, such as a DMAT team. There are large filter devices that can provide water for a larger number of people, but for decades I’ve wanted something I could carry in my pack that was lighter than a filter, and also, in a disaster, could disinfect lots of water, fast, and without iodine residue. Up until now, the best was a big bottle of iodine tablets.

For more background on water disinfection—I’ve scarcely scratched the surface—I recommend you to Howard Backer’s definitive and readable chapter on the topic in Auerbach’s wilderness medicine textbook.⁽¹⁾ Over the past decade, commercial water purification has advanced. For example, some hospitals now use a system that injects silver and copper ions into water in trace amounts which provides a high level of disinfection with no significant downside except the cost and size of equipment. But for various reasons, pack-portable versions of this technology never evolved. But, more interesting has been the technology of mixed oxidants. Mixed oxidants, from the electrolysis of salt water, has been used for commercial water supplies, and is extremely effective (even killing *cryptosporidium* with just a bit of extra contact time, unlike iodine or chlorine), and is tasteless and nontoxic.

This process electrolyzes a salt brine solution to provide a mixed-bag or chlorine-based oxidants—hypochlorous acid, and various chlorine-oxygen combinations. This won’t remove heavy metals, sea salt, or various poisons, but it does a just dandy job for bacteriological purification.

See the company’s website at miox.com for more.

I finally invested in a MiOx unit (from rei.com). Having gotten it, I’ve become even more impressed. Here are the bugs it kills:

- Protozoa, including Cryptosporidium, Giardia, Cyclospora, and Entamoeba histolytica
- Bacteria, including Staphylococcus aureus, Clostridium perfringens, Campylobacter, Salmonella, Shigella and E. coli
- Viruses, including those that cause polio and Hepatitis A

Here are the specs:

- Weight:
 - Purifier: 3.5 oz (99 gm)
 - Complete Kit: 8 oz (227 gm)
- Dimensions:
 - Purifier: 7.1" x 1.0" (18 x 2.5 cm)
 - Complete Kit: 7" x 4" x 1.5" (17.8 x 10.2 x 3.8 cm)
- Operating Temp Range: 20 to 130 F (-6.6 to 54.4 C)
- Storage Temp Range: -20 to 160 F (-28.9 to 71 C)
- Water-Resistant to 60' (18m)
- Maximum Altitude: 60,000' (18,288 m)
- Batteries: 2 x CR123 lithium camera batteries (6v total)
- Battery Life: 200+/- liters (depends on dosages)
- Required treatment times for:
 - Viruses – 15 minutes
 - Bacteria – 15 minutes
 - Protozoa – 30 minutes (Giardia)
 - Cryptosporidium – 4 hours



Note that it's lighter and faster to use, more effective, and probably more rugged than any filter.

Basically, it's a thick pen with

- batteries in the bottom,
- an about 10-mL chamber with some rock salt at the top, and
- a little 1 mL reaction cell with an electrode just below this.

You take the salt chamber-which you've previously filled with rock salt-off the very top. There is a keeper strap so you won't drop the salt chamber and lose it.

Taking off the salt chamber reveals the reaction cell, a tiny open well with an electrode in the center. Holding the pen upright, you put 1 mL of water in the reaction cell. You can even just dip the pen in some water to fill it if you wish.

You put the salt chamber back on.

You tilt the pen back and forth several times, so the water travels from the reaction cell into the salt, becoming salty, then goes back into the reaction cell. The salt stays in the salt chamber due to a small mesh of wire screen on the bottom of the salt chamber.

You then press a button, the salt water electrolyzes (fizz! Fizz!), and voila! you have a mL of tasteless but powerful mixed oxidants.

You dump this in your pint/half-liter to gallon/4L water bottle, shake, check with a test strip to make sure the level of oxidants is high enough, splash some on the threads of your bottle, and wait 20'.

The number of times you press the button determines the concentration of the mix: one button-press for 1/2L, two presses for 1L, three for 4L. It only takes a couple of seconds for the solution to be created.

The nice thing about this process is that it is so quick. At about 30 seconds per treatment, that means in 30 minutes you could treat 60 gallons of water. So, in a pinch, you could treat enough water for your DMAT for quite a while, provided you could find a big enough water container and some way to stir it.

The total weight of the pen, spare salt, a bottle of test strips, instruction card (I laminated mine with some clear shelf paper), and four (two sets of) spare 123 lithium batteries in a plastic protective case, is only about 10 ounces.

I got a 123 battery case from anycase.com. I kept the case but discarded the foam lining as it was too heavy. Instead, I put the four batteries, double-wrapped in tiny zip plastic bags from the hospital pharmacy, in the case along with the small plastic bag of extra salt which works fine as padding.

For carrying in personal gear, collapsible lightweight water containers are inexpensive, and make a nice addition to a disaster pack. For example, a 2.5-gallon watersack (from rei.com or campmor.com) weighs only 2 ounces. And, if you carry just the double inner liner of 3 mil food grade polyethylene, without the outer nylon bag, or get a replacement bladder for this, it weighs an ounce, and folds up into something the size of two matchboxes. An added benefit in a disaster is that there is a lightweight shower adapter for these bags (from campmor.com). I've used these bags backpacking and climbing for decades and can't find enough nice things to say about them, especially at the price.

I hope this has at least spurred you to think more about your own needs for water when the next disaster hits.

I have no connection with either MiOx, REI, Campmor or anycase.com except as a satisfied customer.

Reference:

- (1) Auerbach PS. Wilderness medicine. 4th ed. St. Louis: Mosby; 2001.

This article is printed by permission of the author. For more information, including costs of the equipment mentioned, Dr. Conover's website is at <http://www.pitt.edu/~kconover>

CALENDAR**Changes noted in red**

April 10	K9 Training – Contact Winston Cheyney at 345-6329	
April 13	Medical Training – Prepare for Race to Robie Creek	7:30 p.m. At the Compound
April 17	Race to Robie Creek – Need Volunteers!	All Day
April 20	SAR Training – Navigation – Tim Henning	7:30 p.m. At the Compound
April 23-25	SARCON at Reno	
April 24	SAR Field Training – Navigation – Tim Henning	8:00 a.m. At the Compound
April 27	Business Meeting	7:30 p.m. At the Compound
May 1	Work Day – Compound Cleanup (Lunch may be served.)	9 a.m. At the Compound
May 2	K9 Training – Contact Leslie Robertson at 362-5352 or Kit Brown at 343-8706	
May 4	SAR Training – Technical Rescue Overview --Brad Acker	7:30 p.m. At the Compound
May 8	K9 Training – Contact Martha Vandivort at 338-0284	
May 11	SAR Training – Cave Rescue – Jim Noland	7:30 p.m. At the Compound
May 15-16	SAR Field Training – Cave Rescue and Bivouac --Jim Noland	Time & Place T.B.A.
May 18	Medical Training – Heat Injuries	7:30 p.m. At the Compound
May 21	Basketball Game – Harlem All-Stars Comedy Team	7:00 p.m. Capital H.S. Gym
May 21-23	Washington State SAR Conference	
May 23	K9 Training – Contact Charlotte Gunn at 378-7787	
May 25	Business Meeting	7:30 p.m. At the Compound

June 1	General Meeting	7:30 p.m. At the Compound
June 5	K9 Training – Contact Suzanne Ventura at 383-4336	
June 8	Field Certification Class	6:00 p.m. At the Compound
June 15	Medical Training	7:30 p.m. At the Compound
June 22	SAR Training – Mantracking Rockwell, Scovel, et.al.	7:30 p.m. At the Compound
June 26	SAR Field Training – Mantracking Scovel, Rockwell, et al.	Time & Place T.B.A.
June 29	Business Meeting	7:30 p.m. At the Compound

SNOWMOBILE TRAINING IN ELMORE COUNTY—FEB. 28, 2004
--CHARLOTTE GUNN

We don't maintain our own snowmobiles and riders, but do find ourselves organizing many searches for missing snowmobilers (especially at Pilot Peak.) For the field searchers, we rely on spontaneous volunteers, members of snowmobile clubs, and especially our good friends in Elmore County SAR. Therefore, we were delighted when they invited us, together with members of Gooding County SAR, to join them for a day of training in snowmobile safety and operations.

It was hard to think "snow" at the parking lot on the outskirts of Mountain Home, but the drive up to the snowmobile park near the summit certainly did take us into the white stuff. The park includes a three-sided shelter and an oil-drum stove that was kept stoked for anyone who got chilled, generous parking, and access to miles of snow-covered hills and flats. Dave started us with some basic safety rules, and we then had an overview of what makes a snowmobile run and dozens of things that can keep it from doing so. After that, it was all action.



Everyone had the chance to ride—as a driver, as a passenger behind the driver, in one of Kris’s inflated yellow boats behind a snowmobile, on the sled built by Jim Noland and friends. (On the last-mentioned, you stand on the back of the sled, which carries a search dog in a crate or other equipment, and hold onto the handle with the wind in your face; you feel like you should be yelling “Mush, you huskies!” but of course the driver can’t hear you over the noise of his engine.) All three dogs made trips both in the crate and in the boats, so their handlers know the answer is positive when someone asks “Will your dog...?”



Bob, Angie and Martha ready for a ride in one of Kris Walker’s RDCs

After everyone had had chances to try the short trips, snowmobiles and sleds grouped up and roared off for a longer experience that was more or less adventurous, depending on which machine you were connected to. Dave, a very experienced rider, found himself supported only by thin air; Bob’s machine expressed its unhappiness to the point that he had to be towed back to the parking lot.

Thank you, Elmore County, for putting together this session! We learned a lot and as always, enjoyed working with you. The warming trailer with hot drinks and lunches was icing on the cake.

IMSARU members present were Joey Clements with Heidi, Richard Clements, Ray Fox, Charlotte Gunn with Xena, George Gunn, Lina Hensley, Linda Kearney, Tom Kearney, Bob Meredith, Jeff Munn, Martha Vandivort with Angie and Kris Walker.