

TECHNICAL

E-MAG 19

# RESCUE

EMS, EXTRICATION, SAR, AQUATIC, ROPE, DIVE, TACTICAL & USAR



In stark contrast to the balmy weather in Cairns, Queensland on the cover of hard copy issue 60 our Emag cover is from Martin Boyle, another Australian but this time from Australian Emergency Management in Antarctica which promises to bring temperatures down a notch or two.



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We mostly work remote from the office phone so don't expect an answer. However, we will ring you back if your message hasn't been accidentally deleted. Better still email us because we monitor these regardless of where we are:

[rescuemagazine@btinternet.com](mailto:rescuemagazine@btinternet.com)  
[rescuemagazine@aol.com](mailto:rescuemagazine@aol.com)

## SWISSTOOL SPIRIT

Not new, since it was first available in 2006 but worth bringing to your attention if you're not already familiar with the original Victorinox SwissTool which was designed to give the Leatherman Supertool a run for its money. That's a tough act to take on especially since the new Leatherman Supertool that

we are currently testing is just about the biggest and meanest multitool out there. However, to give them their due, Victorinox did pretty well with their first multitool. The Spirit is a redesign aimed at making the SwissTool more ergonomic and comfortable in the hand whilst retaining all the heavier duty tools (heavier duty than the traditional Swiss Army Knife). This is what Victorinox have to say about the Spirit.....

As the successor of the Victorinox SwissTool SwissTool Spirit developed and this is now supplemented by a model with a sharp blade. The Spirit is more ergonomic, more elegant and easier. With just 205 g of a corpse weight, it surprises with its 27 functions. Over 100 years ago was the original "Swiss

Army Knife", the first world-famous multi-tool. Because it is easy to operate particularly functional, versatile and easy, even the SwissTool has received since its launch in 1999 by experts highest recognition.

The Spirit is its predecessor, the SwissTool, to no one and



is one of the most versatile multi-tool in the whole range. The modified product now includes the traditional dull blade knives with scissors instead of the second blade is installed. A SwissTool Spirit consists of the following items: Needlenose pliers, screwdrivers 2, 3 and 6 mm, wire cutter for thin and soft wire up to 40 HRC, cap lifter, nail puller, blade with plain and serrated edge, sharp blade or scissors, metal file, metal saw, wood saw, reamer and punch, Phillips screwdriver 1 +2, chisel / scraper, cable cover cutter lengthwise, wire bender, wire stripper and scraper, cable cover cutter, can opener, multi purpose hook, leather pouch, coupling for corkscrew, hard wire cutter, 10 individual springs, lock release

[www.victorinox.com](http://www.victorinox.com)

## #89 RESCUE TOOL



The Channellock #89 Rescue Tool was designed by firefighters, for firefighters and first responders. According to Ryan DeArment, director of marketing " We talked to many firefighters about emergency situations, and we learned that they don't have time to search for the correct tool, The true advantage of the Rescue

Tool line is that it allows first responders to carry a tool in their pocket that provides multiple life-saving functions."

Manufactured in Meadville, Pa., the #89 combines multiple essential functions into one lightweight tool, eliminating the weight and bulk of carrying many tools. The main feature of the #89 Rescue Tool is a hardened cutting edge designed to shear through soft metal and standard battery cables. Along with this some of the other tools features are:

- Integrated cable cutter
- Narrow jaw that fits into tight spaces
- Tapered pry wedge to open doors and windows
- Spanner wrench tightens and loosens up to 6-inch hose couplings
- Gas shut-off valve slot
- Window punch for safety glass

**SPECIFICATIONS:**

Length: 10.99"  
Weight: 1.59 lb  
Jaw Length: 1.43"  
Joint Thickness: .53"  
Joint Width: 1.62"  
Cutting Length: 1.43"

[www.theRescueTool.com](http://www.theRescueTool.com)

## BUILDING COLLAPSE TRAILER from ResQtec



If you have specific needs, RESQTEC can tailor-make solutions. With years of experience and know-how of rescue we would like to help you picture an eventual future rescue scenario. An example is the Collapsed Building Trailer. The Collapsed Building Trailer has been developed together and in close cooperation with Civil Defense of Saudi Arabia.

The Collapsed Building trailer contains all necessary equipment for combating large collapsed buildings; hydraulic tools, NT Lifting Bags, ProFix, CribBlocks and all their accessories. This trailer can easily be stationed in strategic areas, be moved quickly and be driven safely on unpaved roads. This trailer is modular, requires little maintenance and can be updated easily.

[www.resqtec.eu](http://www.resqtec.eu)



# How to Buy an Ice Axe

by Ken Osterkamp



Ice axes, with crampons and ropes, are the definitive tools of the mountaineer. Within this holy trinity the axe definitely owns the cool factor because in a major motion picture you can kill someone with it.

## CHOOSE YOUR WEAPON

OK, that was a lot of information for a dumb climber. Grab a beer. Sit down. Hydrate. First you'll need to figure out length. While standing normally hold the axe head in your hand, palm on top, pick to the front in standard walking or "cane" position. If you listen to jazz, talk excessively about wine and are generally annoying and pretentious you will insist on calling this piolet canne. That said, the French terms for various ways of holding and using the axe are useful for instruction so you'll want to pick them up.

The traditional advice for sizing an axe is choosing one that almost but not quite touches the ground when you're holding it as described above. There's nothing wrong with going a bit longer for better downhill reach, but remember that an axe is not a trekking pole and you don't need a Paul Bunyan model.

In either case the length will vary according to an individual's height and arm length but for average people will usually fall between 65 And 75cm. This sizing works well for glacier walking and low to medium angle snow slopes, without compromising swingability much.

The shaft should be straight and clean with no rubber grips, pinky rests or

other stuff that might make plunging the shaft into hard snow any more difficult than it has to be. When you plunge your axe for the 1,000th time on a long climbing day you'll thank me. Next, check the head. Is it steel? It better be, or else you'll be watching your friend effortlessly chopping steps in alpine ice while your anorexic little aluminum number bounces off like Polish cavalry off Nazi tanks. The adze should feel comfortable under your hand when you rest your weight on it, because you'll be doing this a lot as you wheeze your carcass uphill.

Once you've found the correct weight, length, shaft and head you're pretty much there. Other desirable features include an adequately sized carabiner hole in both the head and in the spike, useful for deploying the axe as an anchor, to belay with, or for just racking the axe on a carabiner off your harness.

## BREAKING THE RULES

There are times when a shorter and/or lighter axe is desirable. Ski mountaineering, adventure racing and throw-it-on-your-pack-just-in-case all qualify. A shorter axe is better suited to steeper terrain, stows on a pack more compactly, is lighter and swings easier. The last is important for building anchors and platforms, which can take a lot of hacking.

Therein lies a critical distinction. If you anticipate said hacking, go shorter but not too much lighter. The extra weight will get the job done much faster and will save effort when all is said and done. If it's a simply a matter of just-in-case, maybe a summer day trip with a possible short snow-filled couloir or traverse, an all-aluminum model might do the trick.

As always it's about managing risk and consequences. That all-aluminum model will be only slightly more useful than a salad spinner if that slope turns out to be thinly-covered hard ice.

## WHAT'S WITH THE RATINGS?

CE. ISO. UIAA. You see the acronyms, but really, WTF? Here's the beta: in Europe climbing gear is considered personal protective equipment, like a condom, and as such is required to meet certain safety standards. Very roughly speaking these are created by the UIAA, approved by the CE (also called CEN) and tested in accordance with ISO. These stamps are useful but by no means infallible, mostly because testing doesn't always accurately reflect real world conditions.

In America, we don't give a rat's ass and rely on reputation enforced by litigation. Crappy companies generally aren't around very long. So which approach is better? Neither. The bottom line: buy from a reputable company and stay away from brand-new or untested gear.

You may notice another stamp on your axe: a B or T on the head and/or shaft. This indicates it has met testing standards for Basic or more stringent Technical mountaineering. Either is fine; don't stress about it.

## PIMP YOUR RIDE

Time to accessorize, but there's really only one thing you absolutely need for your hooptie, and that's a leash. We're not talking about the shorties fancy clip systems you see on ice tools. It could be as simple as a sling girth-hitched to the head with a keeper knot for your wrist.

The purpose of the leash is to make sure your investment doesn't pull a

Bernie Madoff, as in: "I dropped my axe and the mountain done made-off with it." The leash should be able to support body weight, which any climbing sling will easily, since it's possible you might have to use it as a very temporary anchor to free your hands for something else.

You basically have a two choices in sling design: a hand leash that secures your axe to your wrist, or a longer lanyard-style leash that attaches to the harness or body. The advantage of the lanyard is that you can easily switch-back up a slope while swapping hands to keep your axe on the correct (uphill) side, without stopping to switch your leash. Make your own or buy one, it's up to you.

Two other accessories that are useful: pick and spike protectors and a head insulator. Pick and spike protectors are usually rubber or leather. They exist for transport and storage of the axe to keep the sharp pointy parts from tearing a new one in other, softer gear like your new \$500 down fart sack.

Insulating the head of your axe where you grip it is not a bad idea, since the metal is surprisingly effective at drawing heat out of your hand. You can buy a head insulator, but why would you? An old piece of closed-cell foam and some duct tape—with which it is actually quite difficult to catch ducks, may I say—will do the trick, and it gives you that seasoned mountaineer look that's so popular with the ladies. Don't take a bath for a week and you're there.

## PRACTICE MAKES PERFECT

If you think you're going to self-arrest without practice, you're smoking the wrong end of the crack pipe my soon-to-be-short-lived friend. Practice self-arrest in all its glorious variations at least at the beginning of every season. For good measure practice the boot-axe belay, chopping steps and defending yourself against hordes of marauding zombies. Your partner can play the zombie. Let him use his helmet: safety first!

TR

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Last year we ran the inaugural CanPro Photo Competition. This year we're changing things slightly by incorporating 4 categories and not distinguishing between amateur and professional photographers. Last year's amateur entries were of such high quality that we feel the distinction is unnecessary. *CanPro Global* of Canada have again backed the competition with some excellent prizes. The Four categories for 2011 are:

- **WATER RESCUE** (inc boats)
- **HELICOPTERS/ VEHICLES**
- **USAR/EXTRICATION** (including fire, con-space, industrial rescue & disaster response)
- **ROPE RESCUE** (including cave, mountain and wilderness SAR, tactical & industrial)

Winners of each of the four categories will receive a  
A Nanuk 930 hard case with padded dividers  
AND a Synderco Byrdrench multi-tool  
AND PhotoShops or Lightroom3 or a Manfrotto 055 carbon Fiber Tripod

GO TO: [www.trescue.com/photo2011](http://www.trescue.com/photo2011) to enter

Photos: clockwise from top: Israeli photographer Omer Messenger was the closest contender not to win a prize in last year's competition. London Fire Brigade operational shot, one from Yosemite SAR's extensive collection of hard-to-beat shots from folk like Dave Pope 2010's winner and finally one our man Gary Cross's water rescue shots because he always feels left out and reckons we never print his name on photos that we use.



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# IN THE NEWS

Our man **Chris Walker** put reporter Jonny Beardsall through a watery hell for his article in UK National newspaper the **Telegraph**.....



I'm teetering four metres above the coldest-looking indoor pool at the RNLI's Life Boat College in Poole – and I'm gibbering. Five other landlubbers are sharing this full-on Titanic experience, each having paid £199 for the privilege. The 25m pool, we learn, is packed with hyper-real special effects. The unheated water temperature is a glacial 16 degrees, which makes me think of Leonardo de Caprio and Kate Winslet. But this is of small comfort to me as I stand by to jump wearing yellow wellies, yellow leggings, a yellow coat and helmet and an all-important orange life jacket.

Not only does the college's sea survival facility provide advanced training for crews – enabling them also to empathise with those they might have to rescue – it is fast emerging as a venue for team building. As well as off-setting running costs, half-day corporate courses bring the work of the RNLI to a wider audience. "We're always looking for new crewmen," says Chris Walker, one of the instructors. "Only 10 per cent of volunteer crew now come from a maritime background so we've everyone from hairdressers to bankers."

Walker and another instructor, Grant Walkey, give us our orders: "Step-off purposely rather than leap frantically." I hold my nose and hit the water like a stiff corpse. Ouch. The life-jacket inflates, almost castrating me in the process. Sudden emersion makes me gasp for breath, which, in a real-life situation, is how the body can rapidly close down with hypothermia.

Chris Walker, who was a volunteer lifeboat man for 13 years before joining full-time five years ago, swims beside me checking that I am not actually drowning. I swim towards the group, who have formed a heat-conserving huddle, and Walker tells us to form a crocodile. The basic idea is that you float on your back and wrap your legs around the person in front until everyone is linked together. Each then flails arms in backstroke towards the drifting orange life raft, relying on the survivor at the front for steering.

Getting into the raft is no mean feat. In bitter temperatures – such as the ones in this pool – placing your wellies in the nylon ladder and hauling yourself through the opening to a liferaft is harder than it sounds. "That was all about team work," Walker explains, as I flop and squelch headfirst like a sea lion into the inflatable.

It was then time for more immediate action drills. We seal the canopy shut, our mentor departs, and the ropes tethering the craft are released.

Now we are on our own and keeping-up morale is the priority. This is done with an enforced sing-song, essential as day instantly turns to night and a storm begins to brew. This is becoming startlingly believable.

Unseen at a consul above the pool, Walkey – who is also on the crew of the Swanage lifeboat – is messing with the weather. Inadvisably I unzip the opening for a look-see, whereupon I am hit by sheet rain. Walker is blasting a fire-hose. I zip-up smartly.

There is thunder and lightening, then a buffeting as winds whipped up by four giant fans simulate a force-4 gale and the pool's wave machine creates a metre and a half of swell. Break-out the sick bags. At least one person, even among RNLI crewman, always succumbs.

We spend 45 minutes in this maelstrom. One wretched unfortunate has her head in a bag throughout. From the darkness we hear the roar of rotors and even feel the down draft of a rescue helicopter. Amazed I open up again to see a grinning winch man – Walker – swinging above us in the gloom but from a gantry, not an aircraft. Numb and shivery we are plucked to safety one by one. A kind RNLI soul hands out hot chocolate and shows us to hot showers. On reflection our hellish – if minor - epic was good clean healthy fun with a message. If you can think of an excuse, get this in the diary.

## Lee Lang

Congratulations to Lee, our SAR editor and website king who is now a NASAR (National Association for Search & Rescue) Board member.



## Ken Osterkamp

### Guest Reviewer

You've skipped over the article on ice axes so now meet the man you've offended, Ken, better known to dozens of people as *Gear Flogger*. Mr Flogger provides a bewildering output of short reviews in the kind of irreverent style that we at TR can only aspire to. We'll be picking out some of Ken's more printable reviews each issue for a column in the Emag - kinda syndicated like Letterman. Here is Ken's bio but don't expect to learn much.....

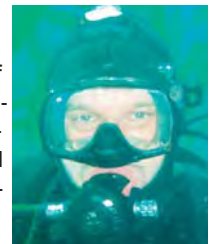
Ken Osterkamp was raised in Fairbanks, Alaska, where school didn't close until it hit 55 degrees below zero on the Fahrenheit scale. Following high school he worked at a strip club, but after the incident he had to go to college where he took up climbing. His grades tanked so he moved to Hollywood to attend rock guitar school during the day while working at a medieval armory at night. After failing to make a living as a rock star he finished college and went to graduate school so he could climb more. After graduate school he went to Uncle Sam's finishing school for boys at Fort Benning, Georgia, courtesy of the United States Army, earning his parachutist badge and attending mountain warfare school. Eventually he ended up as an anonymous mid-level manager for a national nonprofit, for which he tries to compensate by climbing tall mountains. Unfortunately Ken sucks at climbing so he does a lot different things to have the excuse of doing nothing in particular very well. His life is now a cautionary tale for young men worldwide.



Ken, spanking the monkey.... typically

## Sean Johnson

Congratulations to Sean who has been appointed as Emergency Preparedness Officer for the City of Fresno. This is a 2 year staff assignment in the fire department reporting directly to the Chief. His job will be to prepare the city for major disasters and local big emergencies. Basically a local FEMA officer. This is the first time this office has been offered to sworn personnel within fire department. Sean will be working with department heads, politicians, local leaders and the military. A Looks likehel will be putting his turnouts in the closet for a bit.



# Who's Who at TRm?

		<b>ADE SCOTT</b> EDITOR - UK - Coffee & sandwiches 15yrs Head of Technical Rescue Unit (TRU) (ret) Rescue/Defence conslt. past NASAR presenter			<b>REED THORNE</b> ROPE RESCUE EDITOR - USA Rope Guru, Sedona SAR, ex-Fire/Technical Rescue Team, Stonemason & NASAR presenter
		<b>JIM SEGERSTROM</b> US Editor - USA (died Feb 2007) Water Guru, Founder Rescue3 International, Flight paramedic, Tuolumne County SAR			<b>GREG (CHURCH) CHURCHMAN</b> CANADIAN EDITOR - USAR/ Rope Fire Officer, Pilot, Rope Rescue and extrication Instructor
		<b>KELLY MATTHEWS</b> Sales & Admin Director- UK Law Costs Draughtsman, The real Boss of TRm			<b>LEE LANG</b> SAR EDITOR - USA Ex-firefighter & EMT, current LCSAR team member and NASAR Board Member
		<b>DR STEWART BOYD</b> MEDICAL EDITOR -RSA Top Medical Dog - KZN, Trauma Doc, Flight Medic, War-zone junkie			<b>GARY CROSS</b> TRm Senior Chimp - UK Firefighter, ex-TRU, HMCoastguard, Extrication Team Medic, Marine Incident Response Group
		<b>BRIAN ROBINSON</b> Consultant - Con-Space Rescue - UK National Confined Space Rescue Instructor ex-Mines Rescue, ex-TRU			<b>RICH HACKWELL</b> Consultant - SAR/Coastguard - UK HM Coastguard-Head of Technical Rescue, Lifeguard, ex-TRU,(ex Tree Surgeon)
		<b>BEN WALLER</b> Consultant -Water Rescue - USA Water Rescue expert. Battalion Chief, Training Chief, Paramedic, US&R tech & HazMat tech.			<b>MICHEL WOLTERING</b> Consultant - Police - Holland Instructor at Dutch National Police Academy for access in tactical, USAR, hostage rescue etc
		<b>SEAN JOHNSON</b> Consultant - Water & USAR -USA Fresno Fire Dept Firefighter, USAR & Dive Team			<b>DOUG KEMP</b> Consultant - Rope, Water & Cave - UK IRIA Rope & water rescue instructor, IRATA 3, Caver, SAR team member
		<b>NEIL NOBLE</b> AUSTRALIAN EDITOR - Trauma, USAR ex-South African Paramedic, Queensland Paramedic			<b>ROB KEATING</b> NEW ZEALAND EDITOR - Heli, Trauma ex-South Africa AEMS. Paramedic, Heli-rescue, rescue swimmer
		<b>CHRIS WALKER</b> Consultant - Watercraft - UK Ex-Technical Rescue Unit, National RNLi Instructor (HQ),Regional SAR Team Member.			<b>JEZ HUNTER</b> Consultant - Rope & water - UK ex-Royal Marines, Water Rescue, USAR & , Rope instructor, now a trainee Doc
		<b>RICH (DINGER) BELL</b> Consultant - UK - Trauma, Hazmat, Dir.Training - Hazardous Area Response Team, West Mids Amb Service, Paramedic, ex-TRU			<b>JIM HUTCHEN</b> Researcher - UK Firefighter, ex-TRU, Tree surgeon, Extrication Team Snr Medic, USAR Team
		<b>KEN OSTERKAMP</b> Guest Reviewer AKA Gear Flogger - prolific and irreverent mountaineering reviewer			<b>TIM GOOD</b> TRm US Admin Office Owns and runs an art licensing company but allows us to abuse his office staff & facilities.
		<b>AL BANNON</b> ex-TRU & HFRS - UK (died April 2010) Caver, climber, kayaker, firefighter LODD fighting high-rise fire			<b>ROY SCOTT</b> Ex-Bordons Director (died June 2010) Much loved uncle without whose support TRm would not exist



# WHAT COATS DO WE USE?

IMAGES NOT TO SCALE. Left to Right: 66North Thorsmork, Keela Quantum, TSA5in1, Montane Externe smock, Berghaus Extrem

**ADE:** If you asked me what I'd like to be wearing in contrast to what I am actually wearing I would want to get back my long lost North Face expedition jacket if only to compare the difference between top-end jackets 20 or 30 years ago with those of today. Now that North Face is a fashion brand you might wonder about it's 'extreme' capabilities but materials have progressed so far and fast that I suspect a well-made but ultimately middle of the road modern jacket may well be the equal of our 1980's mountaineering clothing. Currently I pray for snow daily so that I can justify wearing the 66North Thorsmork Parka you see in my bio pic. We trialled this a couple of years ago but the design has now transgendered into a shiny unisex number. Mine's the original canvas feel albeit in an antarctic survey orange which looks somewhat out of place in the local supermarket but I won't be shot accidentally by hunters any time soon. It's a roaring fire of a jacket and makes freezing weather a positive pleasure. The other jacket that I choose from my burgeoning coat rack is the Keela Quantum - I think we're reviewing this in issue 60 or 61 after mauling it for over a year - it's an excellent performer in wet, wind and cold but unusually for mountain-oriented clothing, it is not only presentable in mixed company it's positively smart with its smooth black material, clean lines and Gavin Henson collar (a rugby-player-cum-model for those who don't follow welsh rugby).



Doesn't play well with others.....



**BEN:** My foul-weather favorite is the Transportation Safety Apparel's 5-in-1 jacket. This is a two-layer jacket that meets the ANSI Class 3 traffic visibility standard. The jacket can be worn as a two-layer parka. The shell



is a stand-alone rain jacket. The liner is a stand-alone cool weather jacket. The liner has zip-off sleeves so it can be worn as a vest, and that can be worn beneath the shell without the liner sleeves. It is comfortable in a variety of conditions from sleet and snow to tropical weathere events. I have the high-visibility yellow/green version. Both versions include reflective striping. My off-duty favorite is the Columbia Sportswear ECO jacket. This jacket has a waterproof, breathable outer layer over a fleece liner. It is much less bulky than comparable two-coat combinations. It is perfect for situations where you frequently enter and exit a vehicle in cold or rainy conditions. It is the most comfortable outdoor jacket I have ever owned.

**DOUG:** I really love my Montane "extreme smock" (like a buffalo only way better) it has served me well for years and has been everything from a bivvy bag to a rope protector, its waterproof enough, its wind proof, warm, reasonably hard wearing, you don't have to carry multiple jackets, if you do get wet it stays warm and dries fast and best of all its red and makes me look like a scary Santa!!!



**LEE:** For cold weather I wear a Mountain Hardware -Mountain Light hardshell jacket. It is very sturdy and takes major abuse; however, it is very heavy and is not very packable as it does not compress well. For warm weather I have a Lowe Alpine gortex hardshell. It is very light and packs down to a very small size. I always use bright colors as it is generally bad to look like a "rock" when if something happens people need to be able to see you quickly.

**GARY:** Mine is a Berghaus Alpine Extrem, its been on several visits to Wales and the Lake District over the past 17 years and has always stood up to the Welsh all in one day weather test (Wind/rain/sun/sleet/hailstones/wind/baking sunshine), this was always partnered up with a Lowe Alpine fleece which although it had a mid range thermal properties still managed to survive several intoxicated campfire building ember attacks and has only started to fall apart this year at the pocket & front zips. This picture of the Bergaus Attrition from their Extrem range is nothing like Gary's. He wishes his could look like this.



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NEXT ISSUE: Rope



ecogear

# Granite duffel



Brenda got a big ole bag. I know I told you I'd be true. But Brenda got a big ole bag. So I'm leaving you. (With apologies to LL Cool J). Ecogear got a big ole bag, the Granite Duffel, available in 20 and 24 inch length.

Ecogear specializes in planet-friendly sourcing. The Granite Duffel has no PVCs, no phthalates and no heavy metals. Ecogear is also a 1% for the Planet member. Aside from making you feel good, the Granite Duffel will make your gear feel good. Stuff it all inside; the 24 is cavernous and can take it.

Once inside your precious gear is protected by thick TPU supported by 1680 ballistic nylon, with a double thickness on the bottom. Just like J-Lo. There's a small side zipper pocket, a larger internal zippered mesh pocket on the inside of the lid, and a mesh panel that clips into all four corners inside to separate the clean from the skanky. Rounding it out is a removable padded and swiveling shoulder strap.

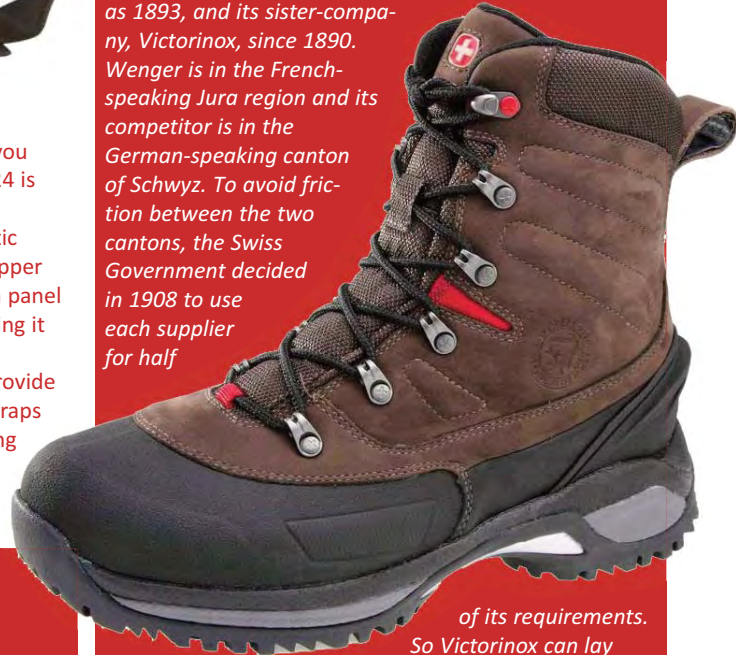
External tie down points on all four corners and compression straps on one side provide even more options for securing your load. Finally, there are hide-away backpack straps that let you should your load in comfort for more involved portage. If you're looking for an eco-friendly yet bombproof duffel, the Granite has got you covered.

\$74.99 at Amazon

# wenger Yeti snow boot

Prepare to be schooled, people. Everyone knows about the Swiss Army knife. Turns out it's made by not one but two companies. It's very complicated, I'll let Wenger explain:

*"The company from which Wenger emerged had been a supplier to the Swiss Army as early as 1893, and its sister-company, Victorinox, since 1890. Wenger is in the French-speaking Jura region and its competitor is in the German-speaking canton of Schwyz. To avoid friction between the two cantons, the Swiss Government decided in 1908 to use each supplier for half*



*of its requirements. So Victorinox can lay claim to being the "original", Wenger can state its Swiss Army Knives are "genuine". In any case, both have been manufacturing Swiss Army Knives for over 100 years and both must meet identical specifications defined by the Swiss Army."*

OK, school's out. Like its sister company, Wenger makes a lot more than knives. We tested their Yeti snow boot, a beefy number that only tips the scales at 3lb 6oz for a pair of size 10US. The waterproof Yeti is a handsome boot with a split suede and polyester upper, burly molded PU half-shell on the toe, and a grippy tread. The light weight combined with a narrow profile gives the Yeti a nimble feel, but it's not a tight boot; in fact it's got a roomy toe box that you'll appreciate when wearing a thick or double sock. The Yeti is built for winter fun: the Thinsulate insulation will keep your little pigs toasty south of freezing, the collar snugs up tight with a single pair of hook lugs at the top, and a shelf on the back of the heel will secure your ski or snowshoe straps. Overall the boot provides a stable platform for hucking about in your favorite winter wonderland, and at a price that won't break the bank.

\$78.99 (on sale from \$99.95) at Altrec

# dmm Revolver carabiner-pulley

Revolver is not just a potty-mouthed rock and roll magazine, a mediocre movie by Guy Ritchie, or a legitimate means of settling arguments in Texas (actual successful murder defense: "he needed killin'") it's also a tricky carabiner design from DMM.

The 1.6oz Revolver carabiner has a burly little pulley built into the frame. It's definitely smooth, if slightly less efficient than a normal (larger) pulley. Used on the rope end of a quickdraw it reduces rope drag, but I got two to carry as part of my crevasse rescue rig. If my partner goes in the slot I (1) get his credit card number, (2) place an anchor and clip in a Mini-Traxion to a VaporLock (after sliding one of my Texas system prussiks above and one below the master point) and let it take the weight, (3) clip in one Revolver to each prussik and (4) clip the end of the rope into the master. Presto, a ZxC haul system.

All this requires two prussiks, two Revolvers, a Mini-Traxion, two Yates cable pickets and two Black Diamond Express ice screws (for snow and ice conditions respectively), a VaporLock (master point) and a CAMP Nano 23 (end of the rope) for a total of 3.5 pounds of gear. A locking version of the Revolver is also available (shown above).

\$25.95 at REI





# OUT NEXT MONTH ISSUE 60

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**Above:** Our Team this issue is Queensland Fire Services USAR Task Force 1 at work in Inondsia and Samoa. As we went to print personnel were also busy helping to deal with the extensive flooding that seemed to engulf most of the state.

**Left:** Cris Pasto of Spencer Fire Dept in New York provides some useful instrctional ideas for vehicle stabilisation using extending struts.

**Below Left:** TRm Aquatic Editor Ben Waller gets plenty wet in his testing and review of the NRS Grizzly - the large version of their Extreme SAR drysuit.

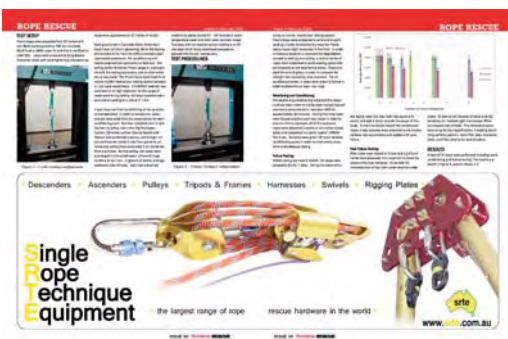
**Below:** A comprehensive research article on Prusik deterioration by our own Lee Lang and Dick Borowski of Larimer Search & Rescue in Wyoming together with Michael Onorato and Dr Susan James of Colorado State University. This was presented at the 2010 Technical Rescue Symposium and is well worth the extra exposure.

**Top Right:** Steve Daly and Doc Boyd review some unusual trauma cases involving water. As usual, much to be learnt from the experiences of others while fervently hoping that such things never happen to us!

**Right:** We compare three very differnt MultiTools to see what tasks can be achieved by each and where your money should be spent - the CRKT Zilla Tool, Wenger Horn (Hunter) and Leatherman Surge are under the magnifying glass.

**Right:** Our series on the new Rope Rescue system introduced into the UK Coastguard continues with a look at powered winches. TRm's Rich Hackwell and Steve Monks excellent diagrams make it all clear.

**Bottom Right:** The last in our series from London Fire Brigade on dealing with Heavies and here Richard Denham and Nick Appleton, assisted by Big Rig Rescue in the US look at utilising recovery companies.







**Above:** Wayne Roe of Queensland Fire Service USAR Task Force 1 weilds a Partner K80 disc cutter outside Cairns Fire Stations in Northern Queensland. Q Our Australian editor Neil Noble (who's wife is a serving member of TF1) was assisted by Steve Smith and Shane Tinsley in compiling our team article this issue highlighting QLD USARTF1's involvement in disaster response missions to Indonesia and Samoa .

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OUT NOW

# ISSUE 59

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**Left:** We had three options for the titles of our Team article on the Hampshire Constabulary Force Support Unit. My effort at the top showed the lads struggling to free a colleague from creek mud and creating a hippo-wallow in the process. Matt Tyson's fantastic middle shot was too low a resolution but his great shot of team members battling a swiftwater flow was a no-brainer.

**Top Right:** We said in the last Emag that the water craft article was likely to change and indeed it did. It has gone from flat-bottom boats to Polymer craft. Plastic to you and me, virtually unsinkable and tough as old boots.



**Right:** Petzl Rig descender review, is it any good?

**Top:** A detailed review of the SAR Products Alpine Lite stretcher which is a very strong, split, alloy flatbed.

**Right:** If that man looks a bit familiar it's because it's Rich Hackwell again after he's been diagramatised by Steve Monk in his excellent instructional pictures for our series on the new Coastguard rope rescue system in the UK.



**Bottom Right:** London Fire Brigade with a cracking new article in their series on Heavies



**Bottom Left:** Rescue-Paramedic Steve Daly looks at Paediatric incidents which among other things includes a bizarre snake bite emergency caused by a self-appointed 'Shamen'.

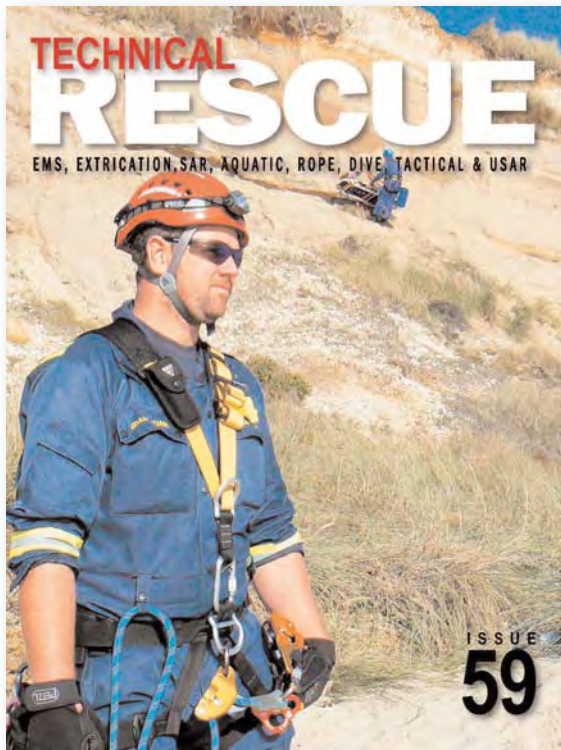
**Bottom:** Titled a 'BacktoBack' test but this article from our Dutch compadre Michiel Woltering gives extensive information on preparing a dog for operations at height. Harnesses tested are those which enable a dog to be airlifted/abseiled.

**Below:** Jon Curley of Dorset Fire & Rescue with assistance from Jon Jorg of Moditech goes over the complications to extrication efforts afforded by modern vehicle materials.

**Bottom Right:** London Fire Brigade with a cracking new article in their series on Heavies







**Above:** We wanted a rope rescue cover for 59 and having had two Canadian covers, three US covers, one Saudi Arabian and one Dutch it was time for something from dear old blighty. We've worked so much with the UK Coastguard lately that they seemed the obvious choice. We got loads of options including some featuring our most willing cover subject Ian Plater but he will again be devastated that after much deliberation, our chosen cover features our own Rich Hackwell. It's no coincidence that Rich engineered the photo shoot so that he became the only one available while a stretcher was coming down.



**Right:** Meanwhile.....if you missed the last issue, you didn't get to read about the Urban Climbing techniques of the Dutch Police (well...not all of their techniques because that would give the game away, but enough to give you some ideas), our Market Guide to PWC or RWC Rescue Water Craft which is the preferred term, London Fire Brigade continuing to deal with Heavy Vehicle Rescue (as they are again in issue 59) and Gear Reviews on Petzl/DMM/Rock Exotica carabiners, Actsafe harness, Keela Jacket and Wenger watch

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# FLOODS & LANDSLIDES

## SOUTH AFRICA flood death toll rises as government declares 33 disaster zones

Warnings of humanitarian crises after flooding claims more than 100 lives and threatens rest of southern Africa:

Guardian UK. David Smith in Johannesburg  
Monday 24 January 2011 14.08 GMT

Flooding in South Africa has killed more than 100 people, forced at least 8,400 from their homes and prompted the government to declare 33 disaster areas. With unusually heavy rainfall forecast until March, the UN has warned that almost every country in southern Africa is on alert for potentially disastrous flooding.

The government said that 88 deaths in the rising toll were in the eastern KwaZulu-Natal province. The costs of damage to the infrastructure in the seven of the country's nine provinces affected is estimated at 160bn rand (£14bn). The Johannesburg area and northern and eastern provinces have experienced some of their greatest rainfall in 20 years. Flimsy houses in townships, where drainage systems are sometimes poor, are particularly vulnerable to the deluge. Bathabile Dlamini, the social development minister, warned that 20,000 people, or about 5,000 families, have been affected in provinces that are running out of money for flood relief. Another 20m rand was needed for humanitarian assistance, she said, adding: "More and more provinces are sending in their requests."

Dlamini admitted the government is in a race against time to avert a humanitarian crisis and said the health department was on alert for a possible cholera outbreak. Farms have also been saturated in Africa's biggest food producer, but farmers will not receive government compensation. The logistics firm Transnet said this month that heavy rains had disrupted its freight rail operations, affecting South Africa's coal and maize exports.

The UN warned last week that flooding poses a threat in most southern African countries. Some of the biggest rivers in the region, the Zambezi and the Okavango, have risen to double their normal levels.

Elisabeth Byrs, a spokeswoman for the UN's Office for the Co-ordination of Humanitarian Affairs, said: "We fear flash floods. It's rather common in the region and this time we are seeing heavier rainfall than in previous years. Five countries are on alert for flooding - Botswana, Mozambique, Namibia, Zimbabwe and Zambia - and South Africa will now declare a disaster."

She added: "All neighbouring countries including Madagascar are on alert ... We could have an extremely major disaster if prevention measures are not stepped up over the next six weeks."

Mozambique has been hit hard, with at least 10 people killed and more than 13,000 people seeing their homes lost or damaged

owing to high waters. There are fears of a repeat of the country's devastating floods in 2000 that left 800 people dead.

Meteorologists believe the floods are caused by a natural weather cycle known as La Niña and the Southern Oscillation mechanism, which has been linked to recent flooding in Australia and the Philippines.



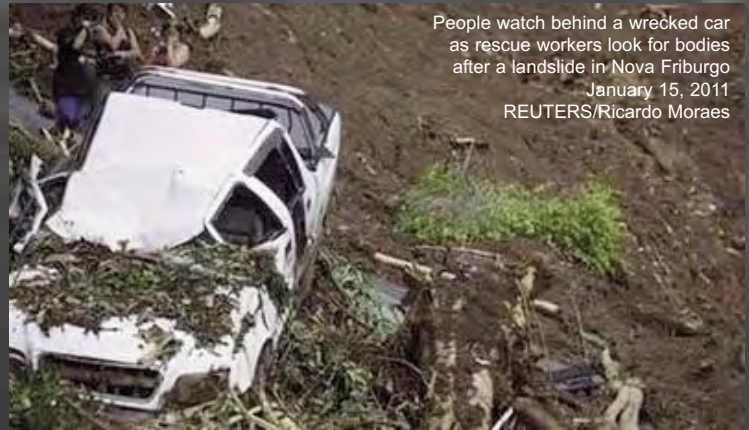
Photograph by: KYODO  
Credit: REUTERS

## BRAZILIAN FLOODS DEATH TOLL now 803

SAO PAULO (Reuters) Sun Jan 23, 12:50 pm ET-

The death toll from floods and landslides that devastated a mountainous region near Rio de Janeiro has reached 803, state authorities said on Sunday, as rescue teams scoured the mud for the hundreds still missing.

The disaster now ranks as the second-worst recorded in Brazil's history, according to United Nations data published in the Estado de Sao Paulo newspaper on Saturday, eclipsed only by a meningitis outbreak that killed 1,500 people in 1974.



People watch behind a wrecked car as rescue workers look for bodies after a landslide in Nova Friburgo January 15, 2011  
REUTERS/Ricardo Moraes

Entire hillsides collapsed last week in the Serrana region, about 60 miles north of Rio, after the equivalent of a month's rain fell in 24 hours.

Avalanches of mud and water ripped through mainly poor communities, tossing cars atop buildings and burying families alive. At least 207 people were recorded missing earlier this week, suggesting the final death toll could be close to 1,000. Local officials estimated at least 300 were missing after the landslides, which have also left thousands homeless.

Fears are now growing about disease outbreaks in the area. Alexandre Padilha, the health minister, visited the worst-affected town of Nova Friburgo on Saturday, and state health authorities have warned against coming into contact with contaminated river water.

Landslides and flash floods are common in much of Brazil at this time of year, but the scale of the disaster has prompted renewed concerns that authorities failed to plan or take action to prevent the disaster. Earlier this week, the Brazilian government vowed to set up a national early warning system that could alert communities to approaching natural dangers. Reporting by Samantha Pearson; Editing by Paul Simao.

## UN STATEMENT on AFRICAN FLOODS 2010

2010 [saw] the largest number of people affected and dying from flooding", the UN Office for the Coordination of Humanitarian Affairs (OCHA) said in a news bulletin received by AFP in Dakar.

The highest [death] toll was in Nigeria with 118, followed by Ghana (52), Sudan (50), Benin (43), Chad (24), Mauritania (21), Burkina Faso (16), Cameroon (13), Gambia (12), with other countries reporting less than 10 dead.

Most people were affected in Benin (360,000), followed by Nigeria (300,000), Niger (226,611), Chad (150,000), Burkina Faso (105,481), Sudan (74,970) and Mauritania (50,815). Other countries had less than 50,000 people suffering from the floods. "These floods worsened the situation in Niger and Chad, which are already facing a severe food crisis", OCHA said. "In Nigeria, Cameroon, Niger and Chad rain is leading to cholera epidemics," it added.

The rain "also disrupted the start of the school year in several countries and led to losses in the social and economic infrastructure, houses and farming".

Last year floods killed 195 people in west Africa and affected 823,291 others



## AUSTRALIAN FLOODS

WIKINEWSSITUATION REPORT JAN21ST 2011

The Australian floods are the most expensive natural disaster in Australia's recorded history. The cost to rebuild damaged roads, buildings and infrastructure across all the affected states may cost as much \$30 billion.

Prime Minister Julia Gillard has suggested a flood levy on all Australians to pay for the cost of rebuilding, and said the federal government will have to cut some spending too. She says the government should be able to get back into surplus in two years time.

### QUEENSLAND

The death toll from the Queensland floods this month is 20 dead, with 9 missing. But Premier Anna Bligh said today that 33 people have died in the state's floods if December's flood deaths are included as well.

Anna Bligh was stressing the enormity of Queensland's flood disaster as the state moves formally into recovery mode. She said they will have a long reconstruction period ahead to fix things.

A total of 97 towns have been flooded or isolated in the past eight weeks and 90,000 kilometres of local roads have been damaged – not including damage to the state's highways.

She said 5,400 houses were destroyed and another 21,000 homes and buildings have flood damage. Six thousand people were forced to flee their homes, and there may be more wet weather to come.

The Queensland minister for tourism, Peter Lawlor, said people thinking of visiting Australia can help by booking a holiday in Queensland. He said most tourism attractions were not affected by the floods. These include the Great Barrier Reef, Cairns, the Gold Coast and Sunshine Coast and much of Brisbane itself where it is business as usual.

In Brisbane, many schools were damaged by the floods and will not be able to open when holidays end on Monday. Many students will have to attend other schools while repairs are done.

Australian insurance companies have defied a request by the federal government to develop a standard flood clause, and broaden access to flood policies to all households. Today's Sydney Morning Herald reports the insurers have decided to stick to their guns and take a hard line on the stricken policyholders. Tens of thousands of flood victims in Brisbane and Ipswich will now be without cover and face financial ruin because the damage was from flooding. However, policyholders in Toowoomba and the Lockyer Valley are expected to be covered by their policies because the damage there was caused by storms or the run-off from storm water.

An official enquiry will examine how well prepared Queensland was for the flood disaster, and how well its emergency services responded to the emergency. The Qld. Premier's flood relief appeal has already collected more than \$200 million, and Anna Bligh said her priority will be "working on a strategy to make sure Queensland is better protected" in future floods.

### VICTORIA

Victoria is experiencing the worst floods seen since 1933, and about one-quarter of the state has been flooded.

Victoria Police reported via Twitter earlier today that water was flowing over the Koondrook – Kerang Road, east of Sleepy Lane into Fosters Swamp. They have warned people to keep well clear of the area.

Western Highway at Lochiel is open to a single lane of traffic and VicRoads staff are in attendance.

The surface of the Edenhope-Kaniva road has deteriorated significantly and police have asked motorists not to use the road at this time.

Hundreds of people spent the night sleeping in emergency shelters overnight. Some towns in flooded areas will face up to a week of isolation.

Floodwaters were expected to peak in Jeparit and Beulah this morning and the SES says the waters could stay high until tomorrow. The Wimmera River in Victoria's west has peaked but if the levees fail at Jeparit, the floodwaters could affect 19 properties.

Police have warned the public to beware of scammers trying to cash in on the flood crisis. They should be check the IDs of charity collectors and be wary of workmen who arrive and offer to do repairs. Some bogus tradesmen have asked for cash up front, then disappear with the money.

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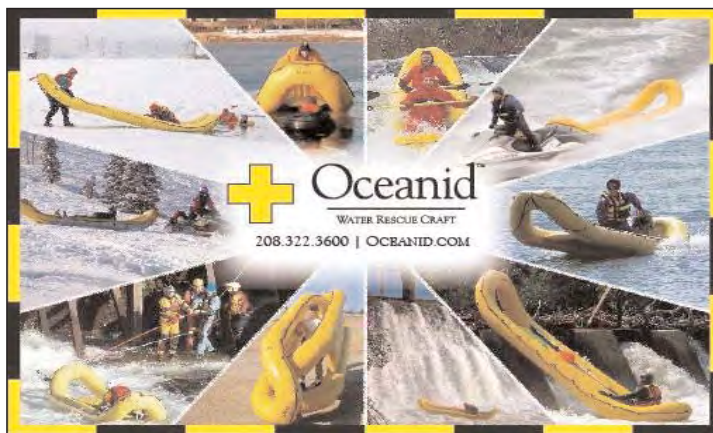


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Hard copy Issue 60 is, surprisingly for us, on schedule although the digital version is, not so surprisingly, behind schedule. We are still looking for suitable software aiming to produce issue 57 as a trial copy that will be freely available to everybody before producing issue 60 as a subscribed version for around \$10 (or about £7.) for 4 digital issues.

As we mentioned in the last Emag, the digital version will be available free of charge to hard copy subscribers. During our research on this it still seems that people are very polarised over their love or hate of digital-only magazines with some getting hold of the wrong end of the stick and thinking that we are switching to digital only. So, just to be clear, the digital version of Technical Rescue magazine will be *in addition* to the hard copy magazine which remains our core product. If you subscribe to the hard copy magazine you will get the digital version for free.

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# 2010's natural disasters cost \$109 billion

Cities are particularly vulnerable to big economic losses when poorly-maintained infrastructure is rattled by earthquakes or exposed to big storms.

By Laura MacInnis, ReutersMon, Jan 24 2011 at 7:43 AM EST Comments

Pakistan floods DISASTER: People wade through floodwaters in Sajawal near Hyderabad, Pakistan.

The floods in Pakistan cost \$9.5 billion.

GENEVA - Natural disasters caused \$109 billion in economic damage last year, three times more than in 2009, with Chile and China bearing most of the cost, the United Nations said Monday.

losses when poorly maintained infrastructure is rattled by earthquakes or exposed to big storms, Wahlstrom said.

"With more extreme weather events, and more earthquakes in urban areas, the state of repair or disrepair in urban areas is really critical," she said.

Climate change

The most populous cities on earthquake fault lines include Mexico City, New York, Mumbai, Delhi, Shanghai, Kolkata, Jakarta and Tokyo, according to the U.N.'s International Strategy for Disaster Reduction.

The 2009 economic price tag of \$34.9 billion was unusually low because of the lack of a major weather or climate event in the period, which nonetheless saw floods and typhoons in Asia and an earthquake in Indonesia.

A major earthquake in China in 2008 caused \$86 billion in damage, bringing that year's economic toll to approximately \$200 billion. In 2005, the hurricanes that struck the southern United States drove up the global disaster toll to nearly \$250 billion.

The economic cost estimates are based on data from national authorities as well as insurance companies including Swiss Re, Munich Re and Lloyd's. CRED is part of the University of Louvain in Belgium and maintains a database of international disasters for the United Nations.

(Editing by Janet Lawrence)  
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The 8.8-magnitude earthquake that struck Chile in February cost \$30 billion. Landslides and floods last summer in China caused \$18 billion in losses, data compiled by the Center for Research on the Epidemiology of Disasters showed.

Although Haiti's Jan. 12 earthquake was the deadliest event of 2010, killing 316,000 people according to the government in Port-au-Prince, its economic toll was \$8 billion. The July-August floods in Pakistan cost \$9.5 billion.

Margareta Wahlstrom, the U.N. assistant secretary-general for disaster risk reduction, said fast-developing countries were facing increasing price tags from natural disasters.

"The accumulated wealth that is affected by disaster events is growing," she told a news briefing in Geneva, where most of the U.N.'s emergency and aid operations are based.

Cities are particularly vulnerable to big economic

losses when poorly maintained infrastructure is rattled by earthquakes or exposed to big storms, Wahlstrom said, also warning of rising risks from "silent events" like droughts.

Of the 373 disasters recorded last year, 22 were in China, 16 were in India and 14 were in the Philippines, CRED said.

The storms, earthquakes, heatwaves and cold snaps affected 207 million people and killed 296,800, according to the data, which does not incorporate an increase of Haiti's death toll announced earlier this month by Prime Minister Jean-Max Bellerive.

The global toll estimates that 55,736 people died from a summer heatwave in Russia which led to crop failures and helped drive up food prices.

It also says 2,968 people were killed in an April earthquake in China and 1,985 died from the Pakistani floods.

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# ARB RESCUE

By James Fairfield

The Rescue of arborists (or tree surgeons) can be achieved with capital rescue tools like the hydraulic platform or ariel ladder but more often than not the target tree is innaccessbile and more specialist skills are called for. Training in access the arborists way provides you with the means and an understanding of the problems faced in rescue from trees

We have all seen arborists at one time or another, maybe you have even hired one to do some work at your house. Have you ever stopped to think about how you would rescue one? It should be easy enough to accomplish.... That is until there are no branches on the tree and you are left with a pole, or the distance between branches are far apart making access to the arborist difficult once in the tree.

During the summer of 2007 I was faced with having to accomplish such a rescue. Let me set the scene for you. It was a hot summer day and a tree crew was doing work in the front yard of a house with a creek running in the front. The bridge was constructed of old wood that I wouldn't walk across much less drive a car over. The arborist was 45ft-50ft in the canopy and about 20ft out away from the trunk. The arborist was cutting down a large branch about 12 inches in diameter and about 30ft long. You can see that he had made a pie cut for relief on the

underside before making the top cut. When at the point he made his top cut, the lead ripped grabbing his lanyard and pinning him violently to the tree! Dropping the saw to the ground and not able to yell to



his ground crew, due to the crushing force around his mid-section, the arborist knew he was in trouble. Unless he was able to get his saw back to cut himself free there was going to be no chance for a rescue. A ground crew member noticed the saw on the ground still running, looked up and seen the arborist struggling. He quickly tied the saw to the climbing

line in order for the arborist to raise the saw and cut himself free.

Since having this happen to me, I have put my so called "PRIDE" aside for a moment. I know a lot of arborist in my area and have

talked to them enough to know that they never mention their close calls or accidents. I guess you can say we all had that "God's gift to tree climbing" mentality. Every morning my back reminds me of that day and the question of "What if?" What if I wasn't able to get myself down? What if fire/rescue showed up and had to make the rescue? Would

my rescue team have been ready? Chances are if you have arborists working in your area you will rescue one of them at some point. Will your rescue team be ready?

I know from being a local firefighter and part of a rescue and EMS company that this is not a rescue that is drilled on enough. So where should the first in units start?

Arriving on a tree rescue scene there are a few things to look for right away. First is finding any hazards in and/or around the tree. While doing your 360 of the scene did you notice any hanging branches in the canopy?

Hanging branches will help to point your rescue climber in the direction that they will make their ascent (climb a path that stays away from being directly under hangers). Make sure that the hanging branch is secured first before working under it in case it falls.

Does the main trunk of the tree have any rot in it? If the tree has rot in the main trunk check to see how bad





this is. You may need to access a different tree next to the questioned tree to have a good anchored overhead point. The use of a throw ball or spikes can ease the access into the tree. If a throw ball is used take care not to throw it past the victim or in the same area. Although you may have the best accuracy, and hit the spot you want every time when you are drilling, a small twig can deflect the path that the ball is being thrown. If that is towards the victim... sad, sad face for you my friend. I can just hear how that would go when you have to tell command you hit the victim with the ball. "Well you see the victim was talking to us when we showed up. Then I kind of



hit him with the throw ball... then... he just stopped talking... and breathing."

**\* WARNING: A THROW BALL CAN CAUSE BLUNT FORCE TRAUMA\***

Spiking is a skill that should be drilled on prior to being done on scene. When done with comfort, it is a fast way of getting to where you want a high point setup. One thing to keep in mind when spiking a tree is to have a lanyard on, however a belay line most likely will not be attached to the rescue climber while making their ascent (best to have two lanyards for tree climbing in case of a fall). A belay line is setup after 90% of climbing is done.

During or prior to the ascent of the rescue climber, the ground crew can be setting up a ground anchor at the base of the tree with a redirect and brake. This allows for the victim's line to be placed through the redirect and locked off. A mechanical advantage can be attached to the victim's line in order to help take the weight of the victim. This also gives a span of control for the ground crew to prevent the victim from lowering himself into an even worse position.

Once the rescuer is at the victim and the ground crew has taken the victim's weight off of the victim's hitch, the rescue climber may attach himself to the victim. The rescue climber must mind the victim's hitch (setup shown on left) while the ground crew is lowering them to the ground. By picking the victim's weight from the ground you are assured that the ground crew has the victim the whole way down.

The other example of a tree rescue is one involving a victim that needs to be lowered from the trunk of a tree that has no canopy above it. This will require less time in planning and more carefulness in

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# ROPERESCUE

execution. The chances that the victim is tied into the trunk with a climbing line will be slim because most tree workers will rely mainly on their spikes and lanyard at this point. The issue arises when an arborist is unable to come down on their own while standing at the top of the pole with little room for an overhead point (as shown to the right). In this case, your overhead point may be at the victim's belly button level. Make sure the ground crew sucks as much weight into the overhead point as possible before the rescuer removes the victim's spikes from the tree. Pay close attention to the victim's spikes as you remove them from the tree. Think of

them as being a loaded cross-bow, when you pull the spikes out of the tree, it's like pulling the trigger; it's going to fly forward at you. After having the victim's weight and removing their spikes from



from around the tree and again have the ground crew lower both victim and rescue climber to the ground slowly.

Keep in mind when working in a tree your overhead anchor

is not the same as if you had tied into a bomber anchor point. A tree is an object that is always in motion in multiple directions and on a windy day will toss the rescue climber around. Attention to the size and the condition of the branches when setting an overhead is extremely important. There is nothing bomber about a tree's canopy! Always practice with spikes and throw balls prior to using them in a rescue. These tools can make or break the rescue. Suggest having a drill for this to your team's officers and assure that you are ready before it happens.

## 'TACTICAL' Rotomoulded BOAT

Specialist French rotomoulded boat manufacturer FunYak is now producing the FY390 in black. The FY390 is the next model up from the Mako we used on our title page for issue 59's Market Guide to Rotomoulded Craft. It is more usually seen in the red of the French Fire Service but it is hoped that the new black will appeal to tactical and police teams requiring a robust and unsinkable craft for their operations.



FunYak say: 'The FY 390 is an unusual boat incorporating the look of an inflatable with a circular fender. This rotomoulded boat, with its V hull, provides exceptional stability and can accommodate 8 people on board representing 600 Kg. The FY390 was chosen several years ago by dozens of rescue agencies in France and abroad for firefighters and emergency management to enable rescues to be undertaken in all depths of water and regardless of submerged hazards since the FY390 not only extremely tough but virtually unsinkable.

info@fun-yak.com www.fun-yak.com



# TEAM MAXIwedge KIT

Twenty years ago TEAM introduced the PW60 Wood Plug and Wedge Kit designed for HAZ-MAT leak sealing operations. It became and remains to this day an inducting standard.

Now we are raising the bar with the advanced MW104 TEAM "MAXIWEDGE" Kit. This kit offers greater versatility by increasing leak sealing solutions to problems resulting from punctures, gashes, slits and slashes in tanks, cylinders and containers both mobile and stationary. Gas, liquid and bulk material leaks can now be controlled until more permanent solutions are available. The MW104 MAXIWEDGE KIT contains 104 various sized wedges from 5/8" - 4" in height and up to 10" in width. Small to large leaks can be controlled easier than even before. Also included in the new MAXIWEDGE kit is a variety of conical wood plugs ranging in sizes from 1" - 5". All wedges and plugs are precision manufactured to near perfect sizes. Wedges and plugs are manufactured from softwoods. When soaked in liquid, softwood will slightly swell forming a tighter seal.



MW104 MAXIWEDGEKIT contains:

**WEDGES**

- 7 • #W581 - 5/8" x 1" x 8"
- 5 • #11210 - 1 1/2" x 10" x 10"
- 7 • #W582 - 5/8" x 2" x 8"
- 3 • #4418 - 4" x 4" x 18"
- 7 • #W583 - 5/8" x 3" x 8"

**Plugs included:**

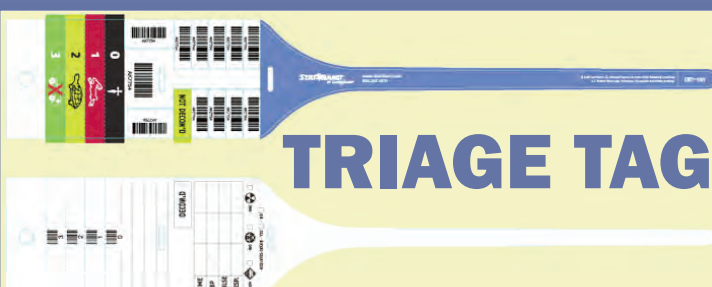
- 7 • #W1121 - 1 1/2" x 1" x 10"
- 10 • P013 - 0" x 1" x 3"
- 7 • #W1122 - 1 1/2" x 2" x 10"
- 10 • P024 - 0" x 2" x 4"
- 7 • #W1123 - 1 1/2" x 3" x 8"
- 10 • P038 - 0" x 3" x 8"
- 1 • P1510 - 1" x 5" x 10"
- 7 • #W2121 - 2 1/2" x 1" x 12"
- 7 • #W2122 - 2 1/2" x 2" x 12"

- 1 • M1040E - Non- spark Mallet
- 7 • #W2123 - 2 1/2" x 3" x 12"
- 1 • C104HD - Carrying crate

The TEAM HAZ-MAT MW104 MAXIWEDGE KIT is a well thought out wedge kit that deserves a place in your HAZ-MAT equipment arsenal. We are confident there is no better HAZ-MAT wood wedge kit being sold in the fire service today.

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- [www.statband.com](http://www.statband.com)

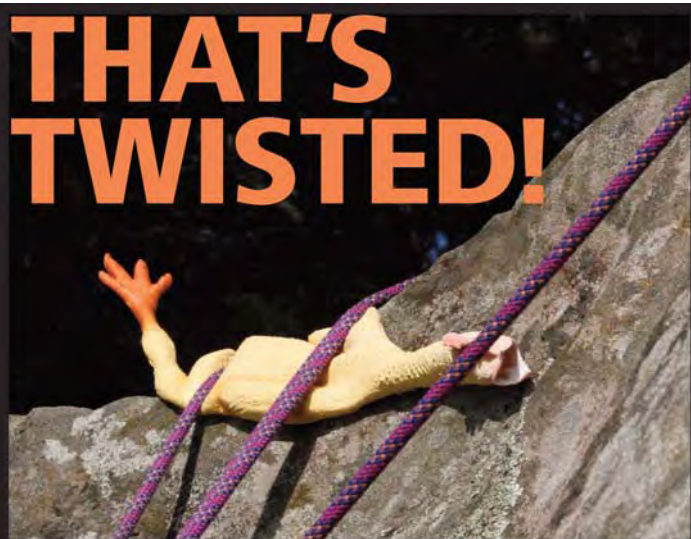
## MAMMUT SMART

sports climbers. It dynamically brakes the climber in an accidental fall, and locks even at low levels of force exerted by the user. In situations where the user has a sudden shock, the function corresponds to the reflex movements of the human body. Suitable for all current HMS carabiners and simple ropes from 8.9 - 10.5 mm in diameter.



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**D**o you have what it takes to compete against the world's leading paramedics? Each year in the USA thousands of medical and rescue personnel converge at the Baltimore Convention Centre to attend EMS Today, the world's largest EMS Conference & Exposition. EMS Today focuses exclusively on pre-hospital emergency medicine, fire & rescue with a variety of special events, and an unrivalled conference program that boasts over 5000 industry professional conferees. The three day conference and two day exhibit hall attracted conferees and buyers from 22 different countries and featured over 275 leading suppliers in the exhibit hall in 2010, and further workshops featured an engaging education and training program to meet the needs of EMS professionals on all levels.



Australia are sending over some of their finest paramedics, Team Australia EMS, to represent the Land DownUnder. Team Australia EMS are a group of experienced, passionate & dedicated paramedics from the Australian College of Ambulance Professionals who are committed to platinum class pre-hospital care & research. [www.teamaustraliaems.com](http://www.teamaustraliaems.com) In March 2011 Team Australia EMS will be travelling to



by TRm Australian Editor  
**Neil Noble**



## Team Australia Ems

the US on an educational & professional development tour, to visit Emergency Medical Services and medical centres of excellence to gain knowledge of world class EMS practice and to bring back their knowledge to Australia for the benefit of Australians. Lead Paramedic Neil Noble explains, "We start our education & development tour on the USA west coast landing in Los Angeles and we will make our way to San Diego, San Bernadino in Las Vegas before heading across to Washington DC, Baltimore & New York."

Part of the research and fact finding mission is to compare & contrast the paramedic registration models in the USA, Canada & South Africa. Currently Australia is working towards a national paramedic registration

model and this information will be invaluable to the Australian College of Ambulance Professionals (ACAP) [www.acap.org.au](http://www.acap.org.au) who are the lead agency representing Australasian paramedics and EMS professionals. ACAP will use this information to advise the Australian government as to the best way forward for national EMS registration. ACAP has already extensively investigated paramedic registration are well positioned to drive the process forward. Its an exciting time for paramedics in Australasia.

Another aspect of the USA tour is to compete in the world famous JEMS Games, considered by many to be the Olympic Games of the paramedic world.

The objective of the JEMS Games is to create a competitive, challenging and educational experience for emergency medical personnel that results in them being better prepared for the myriad of challenges that they may encounter in the field. More importantly, it's a goal of the JEMS Games to enlighten and invigorate EMS personnel from all over the world to deliver the same quality and compassionate care to all patients they encounter after participating in the JEMS Games competition.

The JEMS Games introduces competitors and audiences to new techniques and technology that can be used to manage patients of all levels of criticality. The competition also enables participants to share their expertise, experience, techniques and technology with EMS colleagues from throughout the world. Australia competed in the JEMS Games back in 2004 and impressed the judges with their skills, clinical judgement and efficiency as a team. Big contenders in the JEMS Games include Miami Dade and New York Fire Department EMS, as well as teams from London previously.

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The JEMS Games consists of a preliminary competition where paramedic / rescue teams from all over the world compete on a variety of scenarios. These include Hazmat recognition & evacuation, advanced airway challenge – intubation, ventilation, surgical cricothyroidotomy, patient resuscitation with IV cannulation, intravenous fluid challenges, complex pharmacological calculations and infusions, electrical cardiac therapy – transcutaneous pacing / synchronised cardioversion / defibrillation, rapid patient extrication, spinal immobilisation and patient extraction. 25 teams go head to head and compete for the top 3 spots. These spots are secured by teams with the fastest & most efficient times in the preliminary rounds with the most points. Teams lose points for hasty and sloppy work so the aim is to do it right, do it fast and show heaps of compassion and care.

Neil in training!



In the final competition, teams are presented with a mass casualty scenario, where they are required to lead, manage, triage and co-ordinate the most appropriate care for the most number of patients using limited equipment & resources – an example, you have a building collapse with multiple critical casualties and only one ECG monitor & defibrillator. This part of the competition is extremely exciting and challenging and attracts a large crowd. Previous scenarios have

included a helicopter crash, a bus accident, building collapse, multiple assault in a bar and even another ambulance crew who experience medical emergencies themselves while treating other patients!

The organisers of the JEMS games leave no stone unturned and have been known in the past to “take out” the lead paramedic to see if the remaining paramedics can function without their leader. Check out the JEMS Games website at [www.emstoday.com/en/Special-Events/JEMS-Games](http://www.emstoday.com/en/Special-Events/JEMS-Games)

Team Australia EMS challenges our global counterparts to step up and be counted. Come and join us at the EMS Today Conference & Exposition. Details are available on the website and there is still time to register. Come and compete with us in the prestigious JEMS Games and show the world how the paramedics from your country operate, what technology and equipment they use and how things are done there. Share your knowledge and experience and network with EMS leaders from across the globe – unite the global EMS village!

Team Australia EMS have thrown down the gauntlet. Carpe Diem.

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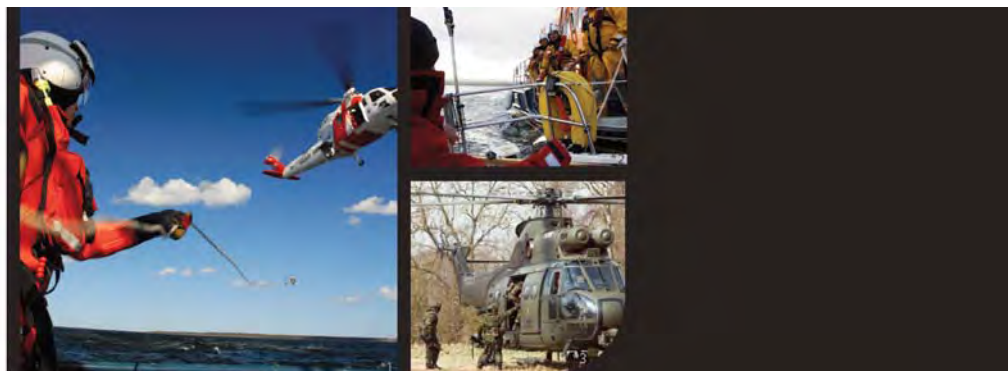
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West Midlands Ambulance Service

# Hazardous Area Response Team

By Rich Bell

Specialist Education & Development Manager for the West Midlands Ambulance Service, Hazardous Area Response Team

The post 9.11 establishment of Hazardous Area Response Teams within most UK ambulance services was applauded by TRm as we see a very tangible benefit to this program in everyday emergency response not just the occasional terrorist incident. It is not a new concept since we featured West Midlands in and on the cover of issue 17 back in 1998 with their dodgy pre-HART acronym for Special Casualty Access Team. These days our own ex-TRU paramedic Rich (Dinger) Bell is head of training for West Mids Ambulance HART and here gives the full background to Hazardous Area Response Teams

## The Health response under ConTeSt, the UK Counter Terrorism Strategy.

Following the findings of the Hot Zone working project in 2005, a gap analysis identified a requirement for early appropriate triage and advanced life support within the inner cordon of any mass casualty event.

The initial concept was aimed at providing fire fighters with the clinical training to deliver the advanced care and triage that was required to be able to do the most for the most in a mass casualty situation.

It soon became apparent that the appropriate people to carry out clinical work was in fact clinicians, so the decision was made to train Ambulance Clinicians how to operate within the Inner cordon of specialist incidents.

Although not exhaustive, the following would give an indicator as to the appropriate deployment of HART operatives,

- Any CBRN/HAZMAT
- Any Patient trapped or injured at Height, confined space, swift or flood water, structural collapse or smoke logged building.
- Areas of public distress or disorder and support to Tactical Firearms operations.
- Any significant transportation incident, road or rail, crashed aircraft to name a few.

Major incidents would be the preferred working environment but thankfully they are few and far between, although the placement of the teams across the country which will be close to 15 by 2012 has been based on the associated risk for that area.

Similar in many ways to the New

Dimensions project, HART is a response to a need, for years the UK has got away with being relatively lucky at coping with large scale incidents, largely due to copious amounts of good will from responders and public alike, however in this era of resilience and preparedness no organization would stand up against the litigation involved in being unprepared.

What actually matters is lives can now be saved of those that would earlier have not.

Thanks to Central funding from the Department of Health, HART has become a reality and lives will be saved.



### PPE,

To enable HART operatives to work in the Inner cordon, a certain type of personal protective equipment is required.

This ranges from

- Extended Duration Breathing Apparatus (EDBA), often paired with a
- Chemical Protection suit to enable working in areas of irrespirable atmosphere and irritant conditions in support of Fire Service Colleagues..
- Civilian Responder One and the
- FM12 respirator, as used by law enforcement agencies, offers HART greater dexterity and wear time with less degradation to the wearer than Gas tight which requires breathable air in order to offer protection !
- The NHS powered respiratory protection suit, a fantastic piece of equipment, offers the same level of protection as CR1, but with some lesser dexterity. However from a patient contact point of view it offers a large clear visor, so things like spacial awareness and facial expressions are clear.
- Safe working at height harnesses,
- work positioning etc,
- self rescue equipment,
- Savox escape sets,
- gas monitoring equipment,
- intrinsically safe radios and torches,





## VEHICLES

In support of the team, a selection of vehicles, the forward command vehicle allows the team to establish communication and deliver robust command and control whatever has happened with National infrastructure, set up its own wifi link, its own GSM network, offer a telephone exchange on scene for multi agency commanders, internet, cameras briefing tools, night vision and a microwave!

The PPE is mainly carried on the Reconnaissance vehicle,



- dry suits &
- PFD's

are all designed to keeping the HARTclinicians safe.

roller shutters allow rapid access to equipment, all are 6.7 ton Ivecos. The third vehicle is a bulk equipment carrier, it supplies the team with vast numbers of dressings etc as may be required at a mass casualty scene, all vehicles carry additional lighting and power generation. To enable access off road, teams are issued with two 4x4 vehicles, current fleet is the Nissan Navarra although these are being replaced with Land rover Discovery 4's Also available is a 6x6 Polaris, looks like a golf buggy on steroids !

## TRAINING

PPE is no good alone without the knowledge of its uses and limitations ! HART initial training, takes the Clinician through a variety of scenarios, a 3 week residential course at a National centre will train the operative in PPE, tactics, procedures and skills to enable the role, Some operatives then carry on to cover a 3 week urban search and rescue Paramedic course, the USAR-P is run at Fire Service College Moreton on the same Rigs that the fire service are trained, direct representation is maintained with the Fire service USAR specialists. The training needs to be realistic and offer some idea of what a live job may look like. These courses follow a local procedure course which will entail a 2 week Breathing apparatus course, a week long CR1 responders course and a week of clinical updates and verification. All applicants to HART must pass a physical competency assessment and a confidence test for heights and confined spaces. Inland water operations is a 3 day course and is attended by all HART operational staff, introduction to the PPE and fast moving water, Boat usage and safe clinical procedures in the environment. Some staff go on and train as Radiation protection supervisors, Rope rescue Instructors or Breathing Apparatus Instructors. Most staff will carry out 2 days training with the local firearms unit so as to operate in support of tactical firearms work. All of this training is on top of their normal core business as an Ambulance service clinician, most of which are paramedics and are registered with the UK health professions council, as such are required to maintain their training to an auditable standard, The same is true of all PPE and tactics training, core competency must be maintained and with such a huge training workload it would be fair to say that the days should be fairly busy !



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Petty Officer 2nd Class Clayton Franklin awaited his rescue by Petty Officer 3rd Class David Melendez during Ice Rescue Training at Coast Guard Station Cleveland Harbor, Feb. 27, 2008. Great Lakes Coast Guard is unique in the Coast Guard for its Ice Rescue Program, brought about by the amount of people that venture out on the ice in the Great Lakes. Photo by Petty Officer 3rd Class William Mitchell.

## ICE RESCUES

1) CLEVELAND – An ice-rescue team from U.S. Coast Guard Station St. Joseph, Mich., rescued a 56-year-old man in Lake Michigan, Saturday at approximately 1:30 p.m., CST. The man was rescued after reportedly falling through the ice while taking pictures of ice cliffs. The victim fell through the ice into about 2 feet of water and called 911 after he was unable to get back onto solid ice. Station St. Joseph personnel received notification of the person in distress at about 1:20 p.m. from the St. Joseph Police Department. “It has been absolutely frigid out there lately,” said Petty Officer 2nd Class Jeffrey Catanzarite, a member of Station St. Joseph’s ice-rescue team. “There is about nine inches of snow on the ground, and we’ve also had 30-knot winds that are driving snow and sand all over the place.” The Coast Guard ice-rescue team, St. Joseph Police Department and St. Joseph Fire Department responded to the scene. “He was so cold he couldn’t get himself out, and it took myself and three other guys on shore to get him back safely,” said Catanzarite.

The man was assisted back to shore and transferred to awaiting EMS.

2) CLEVELAND - Coast Guard Station Sturgeon Bay received a report from local dispatch at about 1:30 a.m. of a man and woman on a piece of ice about a half-mile offshore on the Green Bay side of Little Sturgeon Bay. Station crewmembers used a 22-foot airboat to bring the individuals safely to shore. The two people were able to call 911 using a cell phone after wind pushed them offshore. “The ice out there definitely isn’t stable,” said Petty Officer 2nd Class Casey Garlow, coxswain of the 22-foot airboat. “All it takes is for the wind to shift and things can go really wrong out there.” Both people were reportedly in good condition. The ice in the region has been reported to be about 12 inches thick.

Since Great Lakes ice is dangerous and unpredictable, the Coast Guard advises people to remember the following **ICE**:  
**I – Intelligence** – check the weather and ice conditions, know where

you are going and know how to call for help/assistance.  
**C – Clothing** - wear the proper anti-exposure clothes with multiple layers. If possible, wear a dry suit to prevent hypothermia, which can occur within minutes after falling through the ice.  
**E – Equipment** – have the proper equipment such as a marine band radio, life jackets and screw drivers. Recreational ice users are encouraged to:  
 •Use the buddy system – NEVER go out on the ice alone.  
 •Dress in bright colors and wear an anti-exposure suit that is waterproof, including a personal flotation device (PFD).  
 •Carry two ice picks or screwdrivers for self-rescue. They are much more effective than using your hands.  
 •Carry a whistle or noise-making device to alert people that you are in distress and a communication device; a VHF-FM radio is more effective and reliable than a cell phone.  
 •Stay away from cracks, seams, pressure ridges and slushy areas, which signify thinner ice.

## COAST GUARD MEDEVACS INJURED HIKER FROM RIPIKSKI MOUNTAIN

06 Jan 2011  
 JUNEAU, Alaska – The Coast Guard, Alaska State Troopers and Juneau Mountain Rescue worked together today to rescue an injured hiker from Ripikski Mountain near Haines, Alaska. Keith Hutchins contacted Alaska State Troopers after he was injured while hiking above 1,600 feet on the mountain. The Alaska State Troopers coordinated the search effort with the Coast Guard and Juneau Mountain Rescue. Juneau Mountain Rescue is a volunteer, nonprofit, educational corporation providing technical search and rescue assistance for the Southeast Alaska area. A Coast Guard Air Station Sitka MH-60 Jayhawk rescue helicopter crew medevaced Hutchins and transported him to awaiting emergency medical personnel at the Juneau International Airport who transferred him to Bartlett Regional Hospital in Juneau. Juneau Mountain Rescue is a volunteer, nonprofit, educational corporation providing technical search and rescue assistance for the Southeast Alaska area.



## MSHA SAFETY WARNING Pyott-Boone- GAS MONITORS

Pyott-Boone Electronics issued a letter to inform users that Pyott-Boone Carbon Monoxide (CO) monitors may experience false detections when a radio frequency transmitter is transmitting nearby. The false detection will cause a detection spike and be recorded on the Atmospheric Monitoring System (AMS) event log. The spike will be an instant maximum value unlike a gradual increase with actual rising of CO levels.

This false detection is not limited to Pyott-Boone CO monitors. Other manufactures of CO monitors will experience the same false detections and/or erratic readings. Inspectors and mine personnel should be informed that a hand-held radio that is transmitting near a CO monitor could affect readings on the CO monitor and create inaccurate readings on the AMS. Pyott-Boone Electronics and other manufactures are designing CO monitors to be more resistant to radio interference. Pyott-Boone Letter:

### To Whom It May Concern:

*It came to our attention at Pyott-Boone during 2009 that the saturation of Radio Frequency (RF) devices in the mining industry over the past few years is causing several of our gas monitor models to experience false detections when a mid to high power RF transmitter is nearby for the duration of any transmission.*

*Our Model 2200 Multi-Gas unit has been manufactured since the 1st Quarter of 2008 with a small circuit modification to minimize the interference but we have been unable to apply a satisfactory correction to our single gas detectors. This problem arises from the separation inside the unit of the gas sensor from the circuit board. The RF signals penetrate the outer enclosure and are amplified by the gas monitors.*

*Therefore we have designed a new model of our widely used Carbon Monoxide single gas unit for release during the first half of 2010 that will be much more resistant to RF interference. In regards to all Pyott-Boone gas monitors, including the Model 1711SMD, currently in operation around the world we recommend a safe distance of 50 feet from the gas monitor to any RF emitting device. We realize this is not always possible so please be aware that any RF transmission inside that range will most likely cause a detection spike for the entire length of the transmission. These false readings will be recorded on the MineBoss™ Atmospheric Monitoring System in the event log. State and Federal inspectors should be made aware of this issue and that it does not constitute as a failure of the AMS and is easily recognizable as an instant maximum value spike versus a gradual increase as seen with actual rising CO levels. contact : pboone@pyottboone.com*

## CATASTROPHIC FAILURE of OXYGEN CYLINDER IN REFUGE

On Sunday, January 9, 2011, a catastrophic failure occurred in an oxygen cylinder fitting connected to the breathable air system in a refuge alternative located in an underground coal mine. The refuge alternative was an inflatable tent design manufactured by the A.L. Lee Corporation, model number 4042-35 manufactured on March 21, 2008. This refuge alternative is equipped with 12 high pressure oxygen cylinders, each pressurized at 4,500 psi. The manufacturer of the failed high pressure fitting is unknown at this time. Once the fitting manufacturer is identified, this alert will be updated with this information.

On the day of the incident, the refuge alternative had been examined during the required pre-shift examination, and no defects were identified. Approximately two and one-half hours later, a scoop operator discovered debris scattered on the mine floor near the refuge alternative.

The refuge alternative manufacturer, state inspectors, and MSHA examined the refuge alternative to determine the cause of the incident. The preliminary findings indicate there was a catastrophic failure of a brass high pressure fitting connected to an oxygen cylinder valve. Photograph 1 (below) shows the separation of the top face of the nut from the nut body.

This catastrophic failure allowed a rapid release of oxygen, which pressurized the interior of the steel structure. The initial determination is that the pressure build-up inside the container forced open both the tent deployment door and the air-lock access door, ejecting a supply container and three 5-gallon water containers from the access door area onto a nearby rib. [www.msha.gov](http://www.msha.gov)

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# EQUIPMENT GALLERY

PERSONAL TORCHES	MEDIUM TORCHES	LED TORCHES
MityLite™ 1900 VersaBrite™ 2250 MityLite™ 2AA 2300 MityLite™ 2AA+ 2340	PeliLite™ 1800 SabreLite™ 2000 StealthLite™ 2400 StealthLite™ 2450	1960 LED L1 1930 LED
NEMO™ TORCHES	TACTICAL TORCHES	TACTICAL LED TORCHES
Nemo™ 2400 Nemo™ 2410 Nemo™ 4300	2320 M6 3320 PM6 8040 M10 8050 M11	2330 M6 LED
INTRINSICALLY SAFE TORCHES		
SabreLite™ 2010Z1 Recoil LED™ VB3™ 2220Z1 LED MityLite™ 2340Z1 StealthLite™ 2400Z1 StealthLite™ 2410Z1 Recoil LED™ StealthLite™ 2460Z1 Recoil LED™	Little Ed™ 3610Z0 Recoil LED™ Little Ed™ 3610Z1 Recoil LED™	

# PELI LIGHTING

It's always useful to see a range of kit laid out in front of you. Some time ago we put a double page spread of Holmatro extrication & rescue gear in the hard copy magazine and in the last Emag we discussed CMC and Yates Rope Rescue kits. This issue we have Peli's diverse range of lighting from the diminutive Mini Flasher and Versabrite 3 (which coincidentally is our giveaway gift on the current Auto Subscription Renewal promotion) to the alien invading RALS systems with their telescoping multi-heads and multi LEDs. In

between there are the 'Nemo' dive torches, tactical and industrial lights. Over the past 30 years we must have used most of the Peli range and while we'll always find something to gripe about it's not for nothing that Peli remains our firm favourite as a complete range of lighting. Up to now we know we can recommend any torch/ flash-light secure in the knowledge that it will stand up to whatever abuse you intend to subject it to. If I had to pick just one from this range to have in a post-apocalyptic world (that still has electricity or

## LED > REMOTE AREA LIGHTING SYSTEMS

9430	9440
COMING SOON	COMING SOON

an abundant supply of batteries) it would be the photoluminescent Stealth Lite because it's a sleek, pocket-sized, tough all-rounder with a great beam and good longevity. I'm almost tempted by the ability to use a bigger torch like the M11 as a weapon but with its photoluminescent bezel I can locate the luminous Stealth in the dark when I need to fend off the zombie hordes. I would of course cheat and sneak the RALS 9430 in as well. I know that's two lights but the RALS 9430

will just about fit in my holdall and when the solar flare thingie that the film 2012 confidently predicts will occur, has run its course and we all emerge from our shelters how can you have a beach party with a handheld torch? I've not had hands-on with them yet but there's a good chance that the 9430 might be knocked out of my holdall by the 9440 because I think I can also use that as a flag pole and the centre of a makeshift shelter using those jackets we mentioned in the 'What We Use'



## NEMO™ TORCHES



## INTRINSICALLY SAFE TORCHES



## HEAD TORCHES



article at the beginning of this Emag. These newest lights, the RALS 9440 and 9445 are tube-stored telescopics, about the size of an anti-tank weapon that will make truck stowage and transport to scene much easier and once erected provide a self-contained flood light on a 7ft mast (in the case of the smaller 9440). Check out *PRODUCT NEWS* in issue 60 hard-copy for more on the 9440. The RALS area lighting units continue to prove incredibly useful in flood lighting of incident scenes

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when you have neither the access or perhaps the financial means to have a trailer mounted floodlight. In the image right, Bay Search & Rescue illuminate an ice rescue training session. Bay SAR are an independent rescue group that pioneered use of Hagland tracked vehicles for mud rescue in Morcombe Bay in the UK. Having previously used gasolene generator powered lighting they can vouch for the portability of this easily stowed lighting. Look out for more RALS reviews in TRm. [www.peli.com](http://www.peli.com)





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Cavan, Ireland



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WATER RESCUE TEAM

Quantico, VA, USA



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FIRE DEPARTMENT

Ohio, USA



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VOL FIRE DEPT

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FIRE DEPARTMENT DIVE TEAM

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FIRE & RESCUE SERVICE

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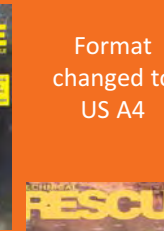
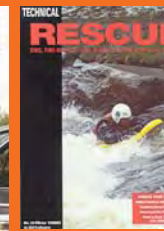
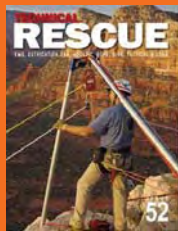
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## WHAT'S on THE COVER?

- 58 A Tactical Urban Climbing Officer of the Dutch Police  
57 US Coastguard Rescue Swimmer  
56 Canadian Ski patroller from Silver Star Resort, BC  
55 Paramedic Ambulance of Ontario, Canada  
54 SWORDS Remote Operated Vehicle  
53 Kawasaki RWC (PWC), one of K38's fleet in California  
52 Arizona Vortex tripod in use in AZ by Maryland Firefighter  
51 TRM's own labchimp Gary Cross (ex-TRU) in mud rescue  
50 Canada Task Force 3 Heavy Rescue  
49 A Canadian Police Bell 212 helicopter  
48 NPS Ranger at Big South Fork Tennessee  
47 NPS Ranger in Yosemite undertakes a waterfall search  
46 A modified Nissan Patrol of Icelandic SAR team  
45 SAR Nederland personnel in Pakistan earthquake  
44 San Fransisco Fire Dept Dive Rescue team members  
43 UK Swiftwater rescue swimmer as 'livebait'  
42 SouthWest Ambulance Service(UK) paramedic in cave  
41 ESU Police Officers at 'Ground Zero', New York  
40 Oz Surf Rescue - Palm Beach, North Shore Sydney  
39 Los Angeles FD swiftwater rescuer on highline  
38 Oklahoma Fire Dept using Holmatro Powershores  
37 Confined space rescuer from Sound Beach FD (CT)  
36 Denmark's Copenhagen Airport's Fast Rescue Craft  
35 TRM's Andy Clark at Potters Bar rail crash (UK)  
34 Palastinian Red Crescent paramedic in Rafah, Gaza  
33 TRU's Barry Smith on airline ascending sewer pipe  
32 South African Johann Du-Toit in shored trench  
31 Gambian Firefighters lower colleague into a well  
30 paramedic Rob Keating deals with a GSW Head.  
29 Cape Town Metro Paramedic Abseils Table Mnt  
28 Lancashire Fire Officer (UK) cutting vehicle  
27 TRU's Ade Scott on airline in silo conveyor  
26 London Police dive team using SRT Ozpod  
25 NSW firefighters in the Warragamba Dam, (Oz)  
24 TRU's Dr Rob Dawes intubates a casualty  
23 TRM's review of how cutters tackle 6 new Jaguar cars  
22 Paramedic attends a mass casualty incident in South Africa  
21 TRU's Kerry Charlton descends in full hazmat with airline  
20 Swiftwater rescuer using a Carlson Board (or similar?)  
19 TRU's Kerry Charlton monitors air in shored con-space  
18 Turkish Mountain Rescue descend with stretcher  
17 West Midlands Ambulance SCAT UK (now HART)  
16 Paramedic rescue swimmer on LifePac helicopter Oz  
15 NSW Police Rescue const. Bill Morris in con-space search  
14 NPS ranger from Grand Canyon National Park  
13 Oz Rescue swimmer of Offshore 2 surf rescue in NSW  
12 National Rescue Service of Denmark using shoring struts  
11 Police Rescue Squad officers Bill and Norm using Lukas  
10 Hampshire Ambulance paramedic uses Combitube  
9 Yorkshire firefighter deploys rescue path on ice  
8 Staffordshire Fire Service rope rescue team member  
7 Poole Lifeguard (Dorset UK) on surf rescue board  
6 South Wales cave rescue raising a cocoon stretcher  
5 The North Sea's mobile rescue rig and Puma helo  
4 A new generation of helos, the NOTAR MD Explorer  
3 NSW Ambulance bike with forest fire smoke in background  
2 Wiltshire firefighter uses Cutters Edge saw to cut entry  
1 TRU's Les Agate (now a senior Fire Service Officer) abseils to glory

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COMING SOON

# RESCUE IN

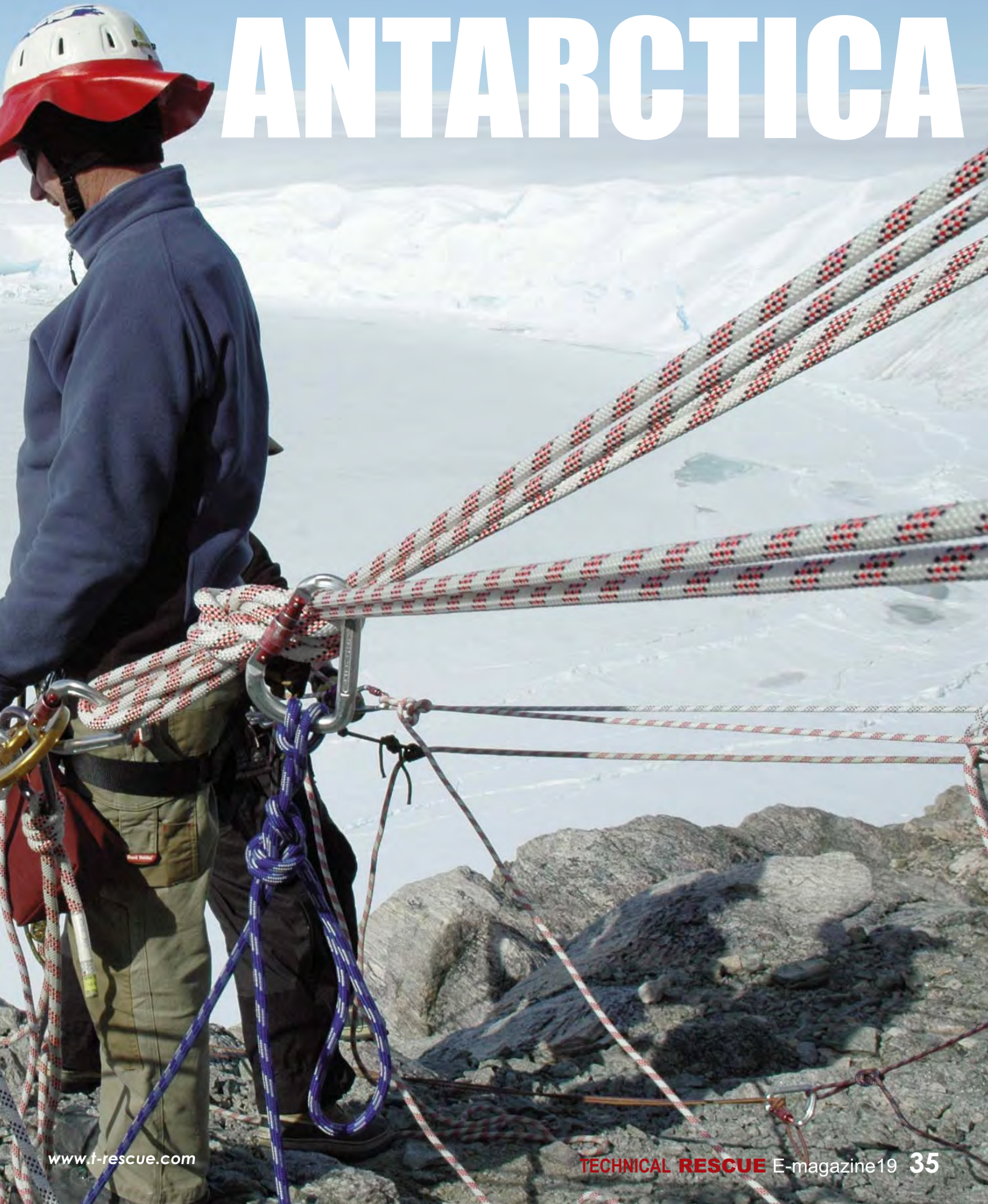
If you thought it was tough turning out to a call on a cold winter's night in your area of operations spare a thought for the folk from the various Emergency Response teams in Antarctica.. In issue 61 we'll begin a series of articles by Martin Boyle, Field Operations Coordinator managing search and rescue and emergency management across the Australian Antarctic Territory and Sub-Antarctic Islands. The Australian Antarctic Survey has been our most southerly subscriber for several years so it's only right that we should now find out where those magazines end up. Expect some spectacular photography, in fact this shot would surely have made the short list for last year's Photo Competition.





COMING SOON

# ANTARCTICA







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<b>Tendon/Lanex</b>	8 %	(8),
<b>Roca</b>	5 %	(5),
<b>Petzl</b>	4 %	(-),
<b>Blue Water, Millet, Edelweiss &amp; Other</b>	3 %	

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