Members of the Hampshire Police Force Support Unit (UK) rigging a a descent and recovery system to remove demonstrators from the side of a warship (training). Tim Jermyn, shown here tending the ID descender, finished his 7-year stint this day and therefore has to move on (albeit reluctantly) to a more regular crime fighting position in the force. Photos by Ade Scott

E-MAG

UATIC, ROPE, DIVE, TACTICAL & USAR

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1

TECHNICA



MAG-INFO

APOLOGIES to US and Canadian subscribers who received issue 58 much later than the rest of the world. This was due to a change in distribution procedure that took longer than expected to sort.

ISSUE JY

OUT NEXT MONTH

Subscribe via the website: www.trescue.com.....subscriptions

NB: The design, content and titling of pages and the cover shot shown here may be different in the final printed magazine













Above Right: One of the covers under consideration

Above Left: members of Hampshire Constabulary's Force Support Unit discover how much suction is imparted by deep mud! Their remit covers SAR, body recovery, suicides, protesters and USAR especially in connection with terrorism and they regularly work with just about all sections of the emergency services.

Left: This was a difficult article to name - it started out as Flat Bottom Boats (as shown here) but before you see it in a paper version is likely to have morphed into either Shallow Draft Boats or even Flat & Progressive Hull Craft! *Right:* Jon Curley of Dorset Fire & Rescue with assistance from Jon Jorg of Moditech and Michigan Firefighter Michael 'Smitty' Smith go over the complications to extrication efforts afforded by modern vehicle materials.

Left: We haven't had a Back to Back test in ages and get two in one issue. This first one is Michiel Woltering's extensive review of Dog 'Lift' Harnesses. ie. those which enable a dog to be airlifted or abseiled. We ended up with several good designs from around the world.

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

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

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), Market Guide to PWC or RWC Rescue Water Craft which is the preferred term, London Fire Brigade continueing to deal with Heavy Vehicle Rescue (as they are again in issue 59), DMM, Petzl & Rock Exotica Gear Reviews etc.etc.







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2010 PHOTO COMPETITION

PRIZES

AMATEUR ~ Winner ~ Nikon D300S Digital Camera AMATEUR ~ Runner Up ~ Nikon P6000 PRO-Winner ~ Nikon WT-4A-Wireless File Transmitter



Entries for the *Canpro Annual Photo Competition* for amateur and professional rescue photographers have now closed. Currently mulling over the winners are our merry band of judges:

Professional photographer John Burchan TRm Editor - Ade Scott US Editor - Reed Thorne Canpro Media Director - Mark Pfeifer

to see who wins the **Nikon** Camera equipment sponsored by **Canpro Training Resources – Occupational Health, Safety and Industrial Rescue** of Canada, who are specialists in training of industrial and confined space rescue as well as OH&S and standby rescue services to North American customers.

The competition was divided into 'Amateur' and 'Professional' with a first and runner up prize for amatuer. Prize for best attempt to be reclassified as 'Amatuer' goes to Claire and Dave at Hampshire Fire & Rescue's Audio-Visual (Media) dept who felt that they should'n't be classed as professional photographers. However, since they get paid to take pictures as well as their other duties we felt that this would be considered as being professional. Nice try though. Bearing in mind Claire's and Kai-Otto's comments about preferring a camera to a transmitter we will take a look at changing the Pro prize if requested by the winner. The winning shots will ultimately be given a stand-alone gallery or centre spread, in TECHNICALRESCUE. There are some outstanding shots but only a handful that would suit the format and spacing of a front cover. We'll see. Winners in issue 59







2010 PHOTO COMPETITION

UE& CANPRO®

ANNUAL DIGITAL

PHOTOS PAGE LEFT- TOP: Yosemite Search & Rescue, MIDDLE: David McCracken. BOTTOM Jorgan Melau PHOTOS THIS PAGE: TOP LEFT: Dave Molyneux of Hampshire Fire & Rescue - UK-Pro • TOP RIGHT: Sam Radion - UK • BOTTOM: Jorgan Melau - Norway. (Jorgan is a a full time rescuer but his brother Kai-Otto is also entered as a professional photographer so is in the PRO category).



5

MAG iNFO

REVIEWS in the **PIPELINE**

A whole heap of new kit from Camp in italy which has been a long time coming considering my first ever lighweight climbing helmet was the Camp Rockstar, a model so good that after over two decades it remains virtually unchanged today. The same can't be said for the Armour helmet that we'll be reviewing with it's mod-



ern look in keeping with many designs these days that seem to follow Hollywoods predicitions of how helmets would look in 2010! We're going to be looking at the Air Rescue harness designed specifically for pararescuers and winchmen and definitley something a little different. Check out Camp's Gravity harness as well - we don't have that at the moment because it's a sternal attachment only but you can see where full body designs might be going. Something more conventional is the Golden Top full body harness (below left) which will be an interesting contrast to the Petzl Navajo and CMC Fire rescue full

body (earlier version pictured right) that we're also currently looking at. In fact, we seem to have quite a lot of rope rescue gear on the go at the moment, more descenders, ascenders and carabiners including CMC's sturdy stainless steel NFPA G rated autolocking carabiner. The Rox back pack is a 40litre sack (left) that opens completely to lay out all your gear. Nothing particulary new in that but this pack looks to be a very good proponent of the design. In a similar (if not simpler) vein, the California Roll (right) from Mountain Tools is currently being abused by Lee in Wyoming as is a Nine1one NGT FF Pro Shell and the slightly heavier NGT Lt 002 Pro Shell (pic right).

Meanwhile, across the Mississippi, Ben is drifting downstream in his NRS drysuit (which we're

reporting on in issue 59) and Force 6's finest PFD with leg loops.

In terms of larger 'capital' items we're working on 6-man tents suitable for disaster response, a whole load of new extrication equipment

that's cropped up at this year's Interschutz and rotomoulded rescue boats.

Neil Noble joins us as TRm Australian Editor.

The more observant amongst you might recognise Neil as the author of some of our earlier South African trauma articles but he decided enough was enough and emigrated to Oz for an altogether more civilised brand of trauma with the Queensland Ambulance Service. Neil's considerably better half is a member of the Queensland USAR Task Force so we get most bases covered. Neil worked with several of our TRU personnel in South Africa who held him in extremely high regard becaue we are only too aware of the range of traumatic, bizarre and downright dangerous incidents he dealt with and the following Bio doesn't really do justice to 50 years worth of incidents crammed into his 16 years of service:

Neil is an Intensive Care Paramedic & Clinical Support Officer:Professional Development with the Queensland Ambulance Service in Brisbane, Australia. He started his career in South Africa in 1994 and has since practiced as an Intensive Care Paramedic, and Advanced Medical Rescue Paramedic, in over 12 countries globally. Has extensive Operational Management experience having managed multiple ambulance stations, both urban and rural, and is a qualified flight paramedic on helicopter & fixed wing operations. With a solid background in Intensive Care training & education, Neil has trained doctors, nurses and paramedics all over the world. Neil graduated at the Durban University of Technology (South Africa) and registered with the Health Professions Council of South Africa. He has further qualified as an international instructor with the American Heart Association and the Southerm African Resuscitation Council for the Advanced Cardiovascular Life Support and Paediatric Advanced Life Support programs.



Neil emigrated with his family to Brisbane, Queensland in 2008 and continued in his educational role as a Senior Clinical Educator at the Queensland University of Technology for the Bachelor of Health Science : Paramedic degree, and is currently a Clinical Support Officer : Professional Development, focusing on the educational development of post graduate paramedics in Australia. Neil is representing the Australian team as lead paramedic at next year's EMS Today Conference & Expo in Baltimore MD. Check out the team's website at www.teamaustraliaems.com

GREG CHURCHMAN has been browbeaten into taking

over as Canadian Editor from Ivan Hansen who is taking a sabatical to spend time with his new family. Greg is on our peer review board for extrication and rope rescue and has contributed some excellent rope articles.

CONGRATULATIONS to GARY CROSS

Who has been kinda promoted (or is it sideways?) and is now seconded to Fire Service HQ researching equipment for procurement - should be old hat to our equipment hunting chimp.

BELATED CONGRATULATIONS to RICH BELL

for attaining the position of Director of Training for HART- Hazardous Area Response Team- at West Mids Ambulance - Dinger now has cauliflower and pips and all sorts on his epaulettes which is a scarey concept.

CONGRATULATIONS (AGAIN!) to Jim Hutchen

for winning BEST MEDIC at the recent European Extrication Challenge (and to another ex-TRU vet Kerry Charlton for his save).



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MAG-iNFO

Who's Who at TRr







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ADE SCOTT

JIM SEGERSTROM

US Editor - USA (died Feb 2007)

Water Guru, Founder Rescue3 International,

Flight paramedic, Tuolumne County SAR,

Editor - UK



Top Medical Dog - KZN, Trauma Doc, Flight Medic, War-zone junkie

15yrs Head of Technical Rescue Unit (TRU) (ret)

Rescue/Defence conslt. past NASAR presenter

BRIAN ROBINSON Con-Space Rescue Editor - UK National Confined Space Rescue Instructor ex-Mines Rescue, ex-TRU

BEN WALLER Aquatic Editor - USA Water Rescue expert. Battalion Chief, Training Chief. Paramedic. US&R tech & HazMat tech.

SEAN JOHNSON Contributor - Dive Rescue -USA Fresno Fire Dept Firefighter, USAR & Dive Team

RICH (DINGER) BELL Contributor - UK Dir.Training - Hazardous Area Response Team, West Mids Amb Service, Paramedic. ex-TRU

NEIL NOBLE AUSTRALIAN EDITOR - Australia ex-South AfricanParamedic, Oz Paramedic

AL BANNON ex-TRU & HFRS - UK (died April 2010) Caver, climber, kayaker, firefighter LODD fighting high-rise fire



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REED THORNE

Rope Rescue Editor - USA Rope Guru, Sedona SAR, ex-Firefighter, Stonemason and past NASAR presenter

GREG (CHURCH) CHURCHMAN

Canadian Editor - USAR/ Rope Fire Officer, Pilot, Rope Rescue Instructor

LEE LANG SAR Editor - USA Ex-firefighter & EMT, current LCSAR team member and past NASAR presenter

GARY CROSS TRm Senior Chimp - UK Firefighter, ex-TRU, HMCoastguard, Extrication Team Medic, Marine Incident Response Group

RICH HACKWELL SAR Editor - UK HM Coastguard-Head of Technical Rescue, Lifequard, ex-TRU.(ex Tree Surgeon)

JEZ HUNTER **Contributing Editor - UK** ex-Royal Marines, Water Rescue, USAR & , Rope instructor, now a medical student

JIM HUTCHEN Researcher - UK Firefighter, ex-TRU, Tree surgeon, Extrication Team Snr Medic, USAR Team

CHRIS WALKER

Researcher - UK Ex-Technical Rescue Unit, National RNLI Instructor (HQ),Regional SAR Team Member.

MICHIEL WOLTERING **Contributor - Tactical Ropes - Holland** Instructor at Dutch National Police Academy for access in tactical. USAR. hostage rescue etc

IVAN HANSEN ON SABATICAL - Canada Acting Fire Captain, Advanced Emergency Medical Care Assistant, ex-Coastguard Aux.

Dedicated to ROY SCOTT 1932 - 2010

Without who's help and support this magazine would not exist. As with dear (not so) old Jim Segerstrom, Roy was the life and soul and died several days after suffering a stroke. Died 16th June 2010. Very sadly missed.



MAG iNFO

WHAT BOOTS DO WE USE?

ADE: My primary 'service' boot has been the Magnum in various guises but latterly the Elite. These are fantastically comfortable from new and have stood up to some serious abuse over the decades. They are my standard item for all rope rescue, con-space and general technical rescues. For well over a year now I also been using a 511 side zip boot which has been really comfortable and definitely converted me to convenience of a side zip. For USAR, chainsaw, cutting tool work I have the high leg Protector Pro Haix chainsaw boots, they're 'clumpy' as hell and I actually used them once as a 4-season boot in the mountains (bet you can't spot the difference between this and their 'Climber' boot?)excellent support and protection and just ooze quality. For water I use OTB ABYSS boots. These are great, water rescue is not really my field but I feel right at home on mud, sand or in water with these lightweight, rugged soled, free draining boots, Only wish I had more chance to use them in anger but I'm always concocting excuses to get wet and muddy. In the mountains, which is admitedly only once or twice a year these days and certainly something well short of techncal ice, my Koflachs were accidentally usurped one season by the Haix but have finally been retired after much good service by the Bates Tora Bora that we reviewed in the winter. This is a La Sportiva looking man-boot that really does the job whilst looking 'kin'ard. For climbing my cobweb covered boots are ASOLO which tells you how old they are since I don't think Asolo actually make rock boots any more and if they did they would be called rock shoes. In their day these were the domain of E8 climbers - far too good for me down at E3! I do however have a backup new pair of FiveTens that have yet to see the light of day and may yet survive unscathed!

LEE: Okay... my primary boots are Asolo 530s. Asolo boots are high volume, wide boots for us Sasquatch-troll types.

I also find Asolo boots are typically comfortable right out of the box and require no "break-in". The 530s have been replaced by 535s (pictured above) which I will probably purchase as my 530s are wearing out - a risk of having 'comfy out of the box' boots.

CHRIS: <u>Climbing</u> - Red Chilli Mescalito - Sticking with what I know. Very comfortable shoes with keen edges and a positive point. I've used Red Chilli shoes since 2000, when I destroyed my La Sportiva Miura's (my previous long serving reliable shoes) in a freak incident involving a 20 foot fall on my third pitch that day (a story for another time). No fault of La Sportiva boots but a good time to get replacement boots to go with my new helmet and harness I needed, and see what other brands could offer. <u>Lowland Search and Rescue</u> - Merrell Outbound Mid Light GTX - Very Comfortable and excellent support in a range of environments, even long endurance searches in urban areas.

<u>Ice Climbing and Mountaineering</u> - Scarpa Mont Blanc. Outstanding comfort for the style of boot and very light for















the size (Especialy as I'm Size UK13, US14, EUR48). I've not had a blister in them yet even when wearing for 3 days straight and only taking them off to change my socks. <u>Water Rescue</u> - Five Ten Canyoneer 2 - Light Sturdy easy and quick to fit and adjust. They are not bulky alowing for unhindered swimming. Durability and comfort for use in water and in a mixture of Urban and wilderness for extended opperations.

Day to Day at work - 5.11 Tactical ATAC Shield Boot. Protection for toes and base of foot from impacts and punctures. Also a handly little hidden pocket on the side of each boot which has enough space for a light weight face Shield for those times when you don't have a BVM (Bag, Valve & Mask) with you. Very comfortable and cheaper compaired to the Magnums I've been using for years. However I still do use the Magnum 8's when I'm teaching afloat using a dry suit without fitted boots. It's a brand that has proven itself to me through the years. I'll always have a pair to hand.

BEN: <u>Duty boot:</u> The Bates Enforcer

(Composite Toe Version) are light, comfortable, break in very quickly, and are water proof. The composite toe version I use has the additional advantage of not freezing the toes in cold weather - a disadvantage of steel toe caps.

<u>USAR:</u> The Warrington US&R Pro 6000 boots are heavier, also waterproof, and more rugged than most duty boots. The ribbed toe cap cover helps prevent early toe cap destruction when crawling areound broken concrete and other debris. One disadvantage is that the arch support could be better, but the advantages outweigh the disadvantages for this boot.

Structural Firefighting: The Servus/Honeywell First Responder Model 3006 (not shown) are really tough, much more comfortable than rubber fire boots, fit well, and are quite rugged. The "sharkskin" toe cap covers increase the boots' service life despite working fires, extrication, and lots of training. Water rescue: The NRS Storm boots are more rigid than their predecessors, the NRS River Work boots. The stiffness hampers finning slightly and it takes a minute to don these over drysuit booties. They are much tougher than most river boots, drain well, and are actually suitable for approach hikes. They perform well in urban floods, and stay on the feet even during Class IV+ swims. Lounging at the Campfire after Swiftwater Rescue Class: The Crocs classic black are comfortable, lightweight, drain water, and easy to slide on over feet that have been in the water for 10 or 12 hours. They are the perfect "doff the river gear" shoes.















MAG iNFO

MICHIEL: I use a basic gray with black climbing shoe from 5.11 and the LaSportiva Ganda and Ganda Guide for (urban) climbing. For rope courses I used a variety of black combat boots with a supple sport style sole. Feel great but I have yet to find a pair that lasts more than a year. I now use the Chrispi SWAT which performs well.

DINGER: My <u>uniform boots</u> are Oakley patrols. For the <u>Incident ground</u> I use the HAIX chainsaw big buggers! (pic =2nd boot down, first column). For <u>Water</u> I have 5.10 Canyoneers.(pic left - yellow boot) for Rope work I use Hanwag sf gtx and Day to Day lounging I use leather crocs (bit like Bens only tougher!)

GARY: General duty.. I use magnums (any)... had

several pairs over the years, worn them in river, gardening, rope access and they still hold together well, still got my original pair from the Unit [TRU], although the quality of some of newer pairs has maybe not been so good since they haven't lasted as long as the original Elites.

Extrication..Haix [pic 2 far left]- a bit stiff to start with, but a very good boot.

<u>Water rescue.</u> 5.10 canyoneers although these aren't the cheapest boots they have outlasted my US diver amphibs/northern diver rock boots/magnums etc and they have a very good grip due to the composition of sole.

RICH: <u>SAR & Rope Rescue:</u> La Sportiva Typhoon

GTX boot and <u>Water Rescue, Boat/ RWC, Mud rescue:</u> OTB Odin or OTB SAR Boot



<image>

 Image: Contract of the second second



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Quality and Performance You Can Trus





Don't just do something.... stand there!

By Howard M. Paul

You, all of our teammates and I joined a SAR team to accomplish important things — as did every member of every other team. Our personality is drawn to the emergency service disciplines to see things get done and help that stranger who **really** needs help, frequently at oh-dark-thirty in miserable weather.

We are fortunate that some of our colleagues also see a tad bit further than the next mission and recognize the "bigger picture," taking on leadership positions within our own agency and at the international, national, regional and state levels. We recognize their skills and then nominate them for office or suggest that they apply or quickly appoint them. Without them our profession would be mired in the practices of decades ago.

Years ago I examined my schedule that resulted of my various commitments to SAR. I enjoyed every one of the several

roles I had been asked to accept or been elected to, or for which I had happily volunteered.

But what? I was astounded; it could not be right. To meet the commitments I had made to friends and colleagues, teams, associations and boards I had 38 meetings a year on my schedule. These were not job-related meetings, they were all on my dime and clock, both around the nation and local.

It was then that it dawned on me that I never read books anymore. I had no time to read — none. Yet, reading is one of my favorite pastimes. I had usually read two or three books a month. I decided to fix that, so I began an earnest process to peel off some of those commitments and their attendent meetings.

The most useful tool was a shovel — to get through all the papers on my desk. I dug down and found, to my astonishment, several more layers of papers from projects I had accepted, or created, from years earlier — and had forgotten! I had never

realized that before I completed some of those projects, or terms of office, I had taken on more. My contribution to each suffered, dreadfully, and so did the project's organization because they depended upon me.

It took me more than a year to extricate myself from every "yes, I'll do it" I had uttered.

Aside from obviously hurting yourself by taking on too many commitments — a position on the unit's board of directors, serving on a county council, chairing a regional committee, managing an accreditation program, editing an organization's journal — can you do justice to the many organizations you ostensibly want to help?



Your peers expect you to contribute. They might count on you to research and draft a policy, chair a committee, manage a critical project. Perhaps they expect you — because you agreed — to manage a major, keystone component of the organization such as the web site (which interacts with every other department or committee in the agency). Your important, and most valuable, commitment may be as simple as recording and certifying the minutes of meetings. Many changing outside factors have a bearing on your ability meet your commitments. Family needs may take more of your time or your job duties might change (for the better or worse). You hold back the work of others that count on you — and your organization —if your job becomes so busy that you can't return phone calls and e-mail or meet schedules. Life is fluid; it's not wrong to admit, too, that your interest may have waned.

If you can no longer get the job done, you will earn the respect of your colleagues, your fellow directors or officers, or your supervisor if you just tell them. Don't let fear of incomplete work freeze you into remaining silent. To the contrary; I would rather have a colleague tell me, "Look, I just don't have the time I did when you appointed me. I wish I could, but I can't get Xxxx done" than to have to continually ask, "When can you report so we can complete the project?"

I recall one gent elected to a board of directors that attended not one of its meetings in two years — not one. It was obvious he didn't care about his constituents. To this day I have no idea why he ran for the position, other than, perhaps, to pad a résumé. And of another whose job function has to be regularly reassigned to others so the organization can continue its mission. If you are a conscientious leader, one that does a job very well, you will still be invited, or appointed, to accept more of these positions. Can you do it? Does your current situation and its responsibility, necessary time and commitment to high quality **really** leave time for another responsibility? As much as you might want to accept another opportunity to help in another area, will the quality of your work everywhere suffer?

If you've been asked to contribute, it is because your peers value you and the quality of your results. They deserve to receive what your reputation leads them to expect from you. So does every person that our many organizations indirectly assist — people that are lost, injured, trapped, sick and scared (and their family).

You can be remembered as someone who "Did a superb job, an excellent chairperson/officer/coordiantor/advisor that we can count on" or you can be remembered as someone who "Usually didn't finish what s/he took on and only did a half-assed job when they did."

To do your best at times you must say no. You will earn my respect if you say, "Thank you for asking me, but right now I am committed to "xxxx." Your project deserves time I would have to take away from "xxxx" and both would suffer if I could not give each my best effort.

Some will ask, so let me tell you I had no particular person in mind when I wrote this. People I know from many years ago to today serve as an illustration of this syndrome. If you do think, however, that you see yourself in this article, it is time to reevaluate your ability to commit to "yes."

By the way, I now read three to four books a month again and love it. I'm thinking of other areas in which I might be able to help (if others wish) after my current responsibilities come to their end.

Howard M. Paul is a 25-year veteran of Alpine Rescue Team, Evergreen, Colorado. He has held at least 15 elected and appointed positions at the national, regional, state and local SAR level; has lead eight major SAR projects; has taught at 21 national and state emergency service conferences. He is glad that today he has limited himself to one local, one statewide and one national position.

AERIAL LADDERS HAVE A PLACE IN SWIFTWATER RESCUE, JUST NOT FOR LAUNCHING BOATS.



BEN WALLER - TRm Aquatic Editor



1) Aerials can be used as a long Reach device if there is a safe place to set up the truck and if the aerial is designed to operate at the subsequent angle involved.

2) If your aerial is rated for rope rescue, you can rig a mechanical advantage system and use it to lift a victim from, for example, a car stuck in a flooded low-water crossing. I've personally participated in a successful rescue using this technique. If you use #2, you MUST ensure the following:

- IF you're going to do this, practice it in advance.
- EVERYONE involved in this system must be familiar with and trained in a) the specific
- aerial ladder in use, b) high angle rope rescue and c) swiftwater rescue.
- The aerial must have a stable place to set up; a solid paved roadway is best. Avoid the top of undercut river banks if you must set up above water level.
- The aerial must be elevated and extended to the angle and reach that give the maximum tip load rating.
- A good rope system is a simple 2:1 with the static side rigged from the aerial ladder tip
- An odd-numbered rope system with a change of direction at the aerial tip can multiply the force applied to the aerial tip. That can, in turn, exceed the tip rating for the aerial ladder and tip it into the water.
- The tip attachments for the rope system MUST be rigged equally from side to side. If the aerial is not equipped with tip-are rigging points, rig webbing in a figure 8 pattern around both ladder beams just above a ladder rung. Clip the carabiner for the tip change-of-direction pulley through both of the loops in the resulting firgure 8. This will keep the load distributed equally on both ladder beams.
- Use a second change-of-direction pulley attached to rated rigging rings at the turntable if they're available. If the aerial doesn't have rigging rings, use webbing attached to the main trunnion. The intent here is to redirect a force that would try to pull the aerial tip into the water down the ladder box. This puts the ladder box into compression, but aerials are rated for that force it's applied every time someone climbs the ladder.
- Ensure that the load does not drop into moving water this will shock load the ladder.
- If the ladder is set up on a riverbank, it will also torsionally load the ladder.
- Never use the aerial ladder as a 'crane' for a swiftwater rescue; even aerials that are rated as cranes are not rated to directly lift people from moving water
- Last, but not least, if you aren't comfortable with the technique, don't use it.

AQUATIC

DROWNING DOESN'T LOOK LIKE DROWNING BY MARIO VITTONE USCG

Nothing new and astounding in Mario's piece here since he's been saying much the same for decades but still many who don't realise.....



he new captain jumped from the cockpit, fully dressed, and sprinted through the water. A former lifeguard, he kept his eyes on his victim as he headed straight for the owners who were swimming between their anchored sportfisher and the beach. "I think he thinks you're drowning," the husband said to his wife. They had been splashing each other and she had screamed but now they were just standing, neck-deep on the sand bar. "We're fine, what is he doing?" she asked, a little annoyed. "We're fine!" the husband yelled, waving him off, but his captain kept swimming hard. "Move!" he barked as he sprinted between the stunned owners. Directly behind them, not ten feet away, their nine-year-old daughter was drowning. Safely above the surface in the arms of the captain, she burst into tears, "Daddy!"

How did this captain know, from fifty feet away, what the father couldn't recognize from just ten? Drowning is not the violent, splashing, call for help that most people expect. The captain was trained to recognize drowning by experts and years of experience. The father, on the other hand, had learned what drowning looks like by watching television. If you spend time on or near the water (hint: that's all of us) then you should make sure that you and your crew knows what to look for whenever people enter the water. Until she cried a tearful, "Daddy," she hadn't made a sound. As a former Coast Guard rescue swimmer, I wasn't surprised at all by this story. Drowning is almost always a deceptively quiet event. The waving, splashing, and yelling that dramatic conditioning (television) prepares us to look for, is rarely seen in real life.

The Instinctive Drowning Response – so named by Francesco A. Pia, Ph.D., is what people do to avoid actual or perceived suffocation in the water. And it does not look like most people

expect. There is very little splashing, no waving, and no yelling or calls for help of any kind. To get an idea of just how quiet and undramatic from the surface drowning can be, consider this: It is the number two cause of accidental death in children, age 15 and under (just behind vehicle accidents) - of the approximately 750 children who will drown next year, about 375 of them will do so within 25 yards of a parent or other adult. In ten percent of those drownings, the adult will actually watch them do it, having no idea it is happening (source: CDC). Drowning does not look like drowning -Dr. Pia, in an article in the Coast Guard's On Scene Magazine, described the instinctive drowning response like this:

•Except in rare circumstances, drowning people are physiologically unable to call out for help. Th e respiratory system was designed for breathing. Speech is the secondary or overlaid function. Breathing must be fulfilled, before speech occurs.

Drowning people's mouths alternately sink below and reappear above the surface of the water. The mouths of drowning people are not above the surface of the water long enough for them to exhale, inhale, and call out for help. When the drowning people's mouths are above the surface, they exhale and inhale quickly as their mouths start to sink below the surface of the water.

• Drowning people cannot wave for help. Nature instinctively forces them to extend their arms laterally and press down on the water's surface. Pressing down on the surface of the water, permits drowning people to leverage their bodies so they can lift their mouths out of the water to breathe.

Throughout the Instinctive Drowning Response, drowning people cannot voluntarily control their arm movements. Physiologically, drowning people who are struggling on the surface of the water cannot stop drowning and perform voluntary movements such as waving for help, moving toward a rescuer, or reaching out for a piece of rescue equipment.

From beginning to end of the Instinctive • Drowning Response people's bodies remain upright in the water, with no evidence of a supporting kick. Unless rescued by a trained lifeguard, these drowning people can only struggle on the surface of the water from 20 to 60 seconds before submersion occurs.

(Source: On Scene Magazine: Fall 2006) This doesn't mean that a person that is yelling for help and thrashing isn't in real trouble – they are experience aquatic distress. Not always present before the instinctive drowning response, aquatic distress doesn't last long – but unlike true drowning, these victims can still assist in there own rescue. They can grab lifelines, throw rings, etc.

So if a crew member falls overboard and every looks O.K. – don't be too sure. Sometimes the most common indication that someone is drowning is that they don't look like they're drowning. They may just look like they are

Look for these other signs of drowning when persons are n the water:

Head low in the water, mouth at water level

- •Head tilted back with mouth open
- •Eyes glassy and empty, unable to focus
- •Eyes closed
- •Hair over forehead or eyes
- •Not using legs Vertical
- •Hyperventilating or gasping

•Trying to swim in a particular direction but not making head-way

•Trying to roll over on the back •Ladder climb, rarely out of the water.

treading water and looking up at the deck. One way to be sure? Ask them: "Are you alright?" If they can answer at all – they probably are. If they return a blank stare – you may have less than 30 seconds to get to them. And parents: children playing in the water make noise. When they get quiet, you get to them and find out why. **www.mariovittone.com**

Disclaimer: The views and opinions expressed by the author are not necessarily those of the Department of Homeland Security or the U.S. Coast Guard.

[AQUA-ED: Whilst drowning may indeed appear a silent responsiveless process ANY in water distress MUST be a rescue priority because in water distress

can become a drowning extremely rapidly].

AQUATIC

DIVERESCUE of kayaker on CUMMING'S DAM Texas



Kayaker rescued from Cumming's Dam

By Anita Miller News Editor - San marcos Record, Tx

— A cheer went up on the gravel bar beneath Cumming's Dam Saturday afternoon after San Marcos Area Recovery Team (SMART) diver Dan Misiaszek rescued a kayaker who had become trapped behind the rushing water.

J.R. Campbell, 28, of San Antonio had been sucked under the dam while trying to run it and was trapped in a compartment built into the face of the dam. He had been there for about two hours, his friend said, before SMART arrived. During some of that time, a South Hays Fire Department volunteer was on the dam

and able to communicate with Campbell. Misiaszek entered the water at approximately 4:30 p.m. Less than five minutes after that, he surfaced downstream with a jubilant Campbell in tow.

James Lacewell, who had been kayaking with Campbell, said they had run the old dam many times in the past but not this year, when the river is running significantly higher.

Lacewell said as they approached the dam, he had held a rope that was attached to Campbell, but "as soon as he hit the water he was sucked under."

Lacewell said he put on a life jacket and had another friend hold a rope while he attempted a rescue. "I swam as hard as I could but I never even got close to the base of the falls."

He said the group had run other dams on their excursion Saturday. "We were nice and confident. This one just sucked him under." He said Campbell is a decorated combat veteran who had undergone survival training. "That's probably what allowed him to make it."

Campbell initially told paramedics standing by that he was fine, but almost collapsed twice as he was helped to a waiting ambulance. "I want to thank these fine gentlemen for getting me out, " he said.

Misiaszek attributed the quickness of the rescue to the well-timed actions of his support team. "It went like clockwork due to excellent teamwork between the South Hays Fire swift water rescue team and SMART," he said.

He said once he reached Campbell, he gave him a "pony tank" from which to breathe before they re-entered the rushing water and let the river carry them free of the currents at the base of the dam.

"We had to submerge about 20 feet to get below the curtain of water and get to the bottom of the dam where the current is less turbulent. When we hit the bottom I gave the rope signal and the topside team pulled us out and secured us downstream when we surfaced."

Misiaszek said he made sure Campbell could not be separated from him. "I made him put his arm through my vest. Even if he wanted to let go I had him clamped. I wouldn't let go."

Cumming's dam is located on the San Marcos River just below its confluence with the Blanco.

It's familiar territory for Misiaszek, who rescued a 16year-old who had also become trapped in a compartment on the dam's face. That occasion, in August 2002, was the first time the SMART team — usually called out to recover bodies — had accomplished a rescue. That story was widely reported in Central Texas and was featured in the April 2003 edition of Reader's Digest. William Hendryx' article was titled "Drama in Real Life — Swept Away."

Saturday "brought back memories," Misiaszek said. While Campbell was being treated in the ambulance, Lacewell lined up the entire rescue team for a photo. He said their group intended to continue to their take-out point a short distance downriver.

Someone would have to take on Campbell though. His kayak had disappeared and was presumed to be still under the dam trapped by the pounding force of the water.







MAG INFO

Enhanced by Adverts?

is to attract

your eye. Two

of my favourite

ads of recent

times have

hvdraulik ad

with the croc

tor?) and this

fantastic CMC

MPD.Even if I

didn't know

what it is I'd

because the

photography

makes it look

so appealing.

we try to use

ads embedded

in articles that

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Where possible

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Weber

our eyes may have been drawn by this interesting strangled chicken ad in the last issue featuring the unfortunate avian being used as a rope protector. It's one of SMC's 'Twisted' series with the next one featuring something else that will catch your eye. Not to everyone's taste I'm sure but the intention is to draw the eye and I'm pretty sure they achieve that objective. Some folk complain about too much advertising in magazines ruining the general look, not to mention diminishing the readable content. That's certainly true of many a consumer magazine with what seem like 3 moistur-





ising cream or erectile dysfunction ads for every page of editorial. At the other extreme are more regional mags with ads for the local chippy or hairdresser giving discounts to emergency services personnel. I remember a UK fire magazine from a few years ago that had an undertakers ad in the front part of the magazine, didn't mention any discounts though. Ads are a necessary evil for virtually every magazine in order to pay for getting the thing out but ironically once a magazine reaches the point where subscriptions are so high that ads become uneccessary, the advertisers are clamouring to get in and be seen. So who can blame the publisher for not looking a gift horse (or cash cow) in the mouth. But hold your horses, I don't know about you but I actually like to see good quality ads in my specialist mags, how else am I going to know where to buy the silencer and long range scope I've just read about in Guns & Ammo? In highly specialised magazines like Technical Rescue the adverts serve the very useful function of filling in the gaps inevitably left by editorial that can't possibly give a full inventory of the kit that will do the particular job being discussed. Unless of course it's a Gear Review which should be self explanatory. Or one of our Market Guides which gives a web address for every manufacture featured. Even then, an accompanying advert often helps us out in expanding the range of items featured in the article. Arctic Airboats in issue 57 was a case in point where the range of models being discussed was so wide that we couldn't do justice to some of the more unusual models - but their ad could!





When your safety's on the line, SMC should be there too. Trusted Gear since 1967.



has a blue theme and we have the choice of two aquatic ads, one primarily blue and one primarily orange, we'll use the blue and try to maintain the look of the article. Most advertisers don't like to be on a left hand page even though it may be better in the context of the design of the article. This is because when you leaf through a magazine you are generally flicking right to left with the right hand page facing you unless you're in Japan. Occasionally we'll stray from this western 'norm' and put an ad on the left hand page but mostly they're on the right because we like an easy life.

A good advert should enhance the page's interest. This might be with well presented additional product information like this Mustang Survival ad describing a couple of their specialist drysuits, or with an eyecatching design that may or may not include additional product info. The point





I'm also a big fan of ads that give me an idea of the vast range of products on offer for a particular discipline. Some might argue that these can appear cluttered but they serve a useful function, they parade the wares, making you dwell a little longer just to identify what's what and they invite you to go away and check out the website or catalogue. In my opinion they also improve the company's chance of being considered for other purchases - for instance, had this MFC-Survival ad simply featured their inflatable

MAG INFO



rafts you might never have realised that they also produce lifting bags, inflatable shelters and air control systems.

Rock Exotica have an ad series that covers both bases, first with an eye-catching incident shot that makes the rope-techies examine what's going on in fine detail and then accompanies that with a glimpse of the range of their products - everything from carabiners and pulleys to pods and grappling hooks, some of which you may not have thought of as Rock Exotica products.



JW Fishers are typical of advertisers that really need to get across something of the range and/or intent of their products because their name doesn't give a clue unless you're already a convert. Advertisers are often so specialised that you may not even realise that your agency could actually use what they're selling. So Fisher's series, while not everyone's cup of tea, does give a good idea of the range of products and applications for their inwater ROVs, radar and detectors. Unusually, though less so for US companies, they also give an idea of prices. You'd be amazed at how difficult it is to get prices out of some companies - always



makes me wonder what they're trying to hide, two tier pricing policy perhaps?

Con-Space is a little more obvious in it's target market but it does a lot more than hardwire voice communications these days since it now owns SearchCam and Delsar so ads like this one on the right featuring the latest generation of Search Cam and their others showing the Delsar acoustic system highlight not only the equipment but that there's a new owner in town!

It's not only the big ads that have impact, I really like these quarter page ads from Raven Packs and WRSI with striking design and colour, an action shot and a hint of what their range entails. In the case of this WRSI ad we were unable to run it because it is too low a resolution and if there's one thing worse than a poorly designed ad it's an ad that appears to be heavily pixelated!



Of course, if you really want to get the point across (and trying to ignore our own fiscal interests) you could do what Ferno Australia did in issue 57 and insert an entire 4-page leaflet into the middle of the magazine. We already had a comprehensive 3-page Review of the Arachnipod in so with their info-ad what more would you need? **TECHNICAL**RESCUE tries to retain at least 65% editorial to non-editorial/ads ratio but if companies continue to produce such educational and good looking ads we might dispense with editorial altogether! [In case of claims of commercialism: 5 of the advertisers mentioned don't currently advertise with us and our 5 biggest advertisers aren't mentioned at all. Some might see this as shooting oneself in the foot, we prefer to think of it as keeping it real and hope the big boys don't notice!]



SEARCHCAM 3000

- Waterproof camera head, submersible to a depth
 of 75 feet (23 m)
- Clutch equipped gearbox, 240° articulating camera
- Ability to record video, voice and still images on to SD or SDHC card
- Interchangeable cameras, switch from color to infrared
- Adaptable modular design
- Lightweight, rechargeable lithium ion batteries

CONTACT US: 1.800.546.3405 / 604.244.9323 sales@con-space.com

WATCH THE VIDEO ONLINE. www.con-space.com

ORIGINALS in Rescue Equipment





PRODUCTNEWS

A Lesson in Helmet Design

Alpine Shield from WILD COUNTRY

The Alpine Shield concept: more protection at the turn of a screw..The Alpine Shield has been designed to extend the range of EPS style helmets, to provide improved stone and icefall protection and extend their climbability. To make it clearer how and why the Shield works, and why it's so valuable, it's

necessary to understand a bit more about how climbing helmets work...

At present the climbing helmet market splits into two camps: tougher, heavier, 'mountain' helmets on one side and lighter, but less strong, EPS helmets on the other.

In the first drawing - Fig 1 - we can see a sharp chunk of ice striking a standard EPS helmet.

Expanded PolyStyrene climbing helmets have been around for many years now, are very popular, and have proved themselves for general rock climbing. Mainly worn (and advertised) on the basis of light weight and comfort, EPS helmets are easily identified, as the foam inner (covered by a light 'plastic' shell) sits directly against the head with little gap between this protection and the skull.

A relevant point to note is that EPS style helmets were derived from cycle helmets.

Safetywise the major attribute of these EPS helmets (known in the trade as 'bumpers') is their ability to stop injury in a

fall when the head will bang or 'bump' the rock. What is less known (although passing the same CE test) - is why 'bumper' helmets often don't deal with falling objects, such as rocks or ice, as well as 'mountain' helmets, a fact which can make them unsuitable for less stable environments.

The sharp ice striking at speed - Fig 2 - may penetrate a standard EPS and go through into the head. The EPS's difficulty is that it must combat two types of impact that are so different: e.g. a slower 'bump' in a fall contrasts markedly to high velocity narrow radius stone fall. And there's a simple explanation for the difficulty of doing both well - material choice. EPS itself, basically the same material a domestic appliance arrives packed in, is solid if dropped or banged (when crushing can disperse impact) but is much less effective against an errant knifeblade.



Thus when hit with a sharper falling object (SEE FIG 1), the thinner 'shell', EPS material and lack of a gap between the foam and the head can lead to a higher chance of an object 'piercing' the foam and contacting the skull. (SEE FIG 2).

Here we see the same impact (Fig 3) with the unique and exclusive Alpine Shield cover in place.

This 'falling object' problem is countered in 'mountain' helmets, partly by use of a thicker outer shell, but crucially by use of a wider gap between the protective material and the head giving more depth to absorb impacts.





And this is exactly where the Alpine Shield concept comes in - to bridge this obvious gap! Uniquely, cleverly and simply the Alpine Shield idea replicates, by placing a light outer shell above the EPS inner, the crucial extra depth of the mountain helmet - providing extra stone stopping power other EPS helmets

can't supply.

In Fig 4 we can see that the extra stopping power of the Alpine Shield helps save from a head strike! And although damage will still occur from stonefall, (SEE FIG 3) the extra resistance of the shell and the overall depth of the helmet gives a better chance of avoiding head injury (SEE FIG 4).



It is this difference, the ability to buy one helmet and to then to choose and alter the level of protection to suit the terrain, that makes the Alpine Shield a true original and a breakthrough for those who like to mix it up.



The Alpine Shield helmet is the worlds first truly modular climbing helmet and the first to allow a choice of protection levels at the turn of a screw! A high performance EPS inner is complemented by an optional outer shell that attaches quickly and easily to make a stronger, safer unit for harsher con ditions.



Not only great to look at, the Alpine Shield really performs, moving helmet design one big step forward and giving the cross-season climbing a superb new tool. BACKGROUND:

Wild Country's research into head protection for climbers and mountaineers instantly revealed a major limitation in existing helmet designs. We found plenty of 'bumper' style helmets, that were good for summer use but not necessarily the best choice in a stonefall situation, or lots of heavy winter helmets that stop stones and ice better but that seemed too much for summer.

What we didn't find though, was the helmet for the cross season climber - the modern athlete who climbs hard fast and light, on rock and alpine - and certainly nothing versatile enough to be used on extreme rock and waterfall ice



CONCEPT:

The Alpine Shield project was born to fill this gap and to create the first truly modular helmet which can be easily modified for summer or winter seasons, daily conditions or even mid-route. A helmet that would adjust quickly and easily, with an additional Shield to dramatically improve penetration protection from stone and icefall.....a helmet to provide new levels of safety and versatility. FFATURES:

Lightweight best in class EPS/Polycarb helmet, Exclusive 'Alpine Shield' polycarb cover - enhanced stonefall protection - with simple 'coin-slot' changeover, Quik-Clik glove friendly adjustable sizing, Adjustable, EVA cushioned, head hugging inner pads, Nexus Acetal quick release chin strap buckle, Smooth16mm nylon chin strap, 4 Torch grips (acetal – better in low temps), Hood friendly sizing for winter wear, 3 Stylish colour choices, Emergency inner sticker, Free storage bag, Free Screw adjustment tool, One size 53cm - 61cm / 21in - 24in

Weight 260 grams / 9.12oz without Shield // 420 grams / 14.81oz with ShieldCE EN 12492 / UIAA 106 / 3 Sigma rated

www.wildcountry.co.uk

PRODUCTNEWS

STATPACK Modular G2 System

StatPacks[™] makes Fast Packs for Medics. Every one is designed to work with the responder's body. Advanced ergonomics, smart weight distribution, comfortable details, constructed to limit wear and tear, and hands-free designs to keep bodies agile all are hallmarks of StatPacks' line.

Now the new modular G2 Cell System allows responders to build a StatPack™ to suit each mission. Jobs, terrain, situations change - the G2's modular systems adapt. There are three new packs, each completely customizable with available specialized extras and removable, jobspecific modules, are all designed to save lives - the Technician (pictured here), Responder and Clinician. The StatPacks™ G2 Cells include a general cell (below), medicine cell, an airway cell, an I.V. cell, and an oxygen tank cell. Cell-compatible packs include the Technician (6 cells), Responder (4 cells) and Clinician (3 cells). Many accessories are also available.







The Technician shown above is the largest of the packs and is a wheeled and backpackable system. This simple, box-style carry-all pack is stackable, with shoulder straps for safe,

hands-free hauling. This unique design keeps straps out of the dirt and muck when you're accessing contents. Internal Cells stack neatly and securely. Accommodates the QuickRoll Intubation Module, IV Module, and small Drug Module, as well as the stackable Cellular System. The removable Roller Cart allows rolling assisted transport

Cost: \$475 Capacity: 6500 cu inches Dimensions: H: 30" x W: 24" x D: 9" Weight: 14.0 lbs

www.statpacks.com



ISC





www.iscwales.com







Tel:+44 (0) 161 621 0309



For the first time Vetter, the German pneumatic manufacturer, has introduced tents especially developed for rescue and medical operations. The medical tents

are from 20 to 60 square meters in area. The proven high quality tents can be inflated quickly using a blower or compressed air bottles. Two people can erect the smallest model in just two minutes. This is possible because all Vetter tents use a one-piece system without any loose parts. When using an additional docking tent, "tent towns" can even be erected – e.g. a mobile hospital with up to 120 beds. The most extensive standard package on the market

Already in the standard package such extras as 4-6 windows, completely

detachable entrance awnings and roof securing net, patented by Vetter, for attachment of medical equipment.

A tear-resistant support frame and flame resistant awning material guarantee durability and safety.

These are well conceived tents for complete operational flexibility and can incorporate air conditioning, water and electrical supply, detachable floors, additional walls for space distribution and docking devices for extensions. Vetter's has developed solutions for all their simple tents to be optimized for special requirements.

The model START is a newcomers package containing all the important basic functions at a fair price performance ratio. Extendable at any time, this universal medical tent can be correspondingly retrofitted to individual requirements and developed into a mobile hospital. Individual production by hand At the production plant in

Zülpich, North Rhine Westphalia, Germany, almost everything is possible with respect to customer orientation. From individual colour design and marking up to additional ducts or ventilation covers via the number of doors and windows which you may require. Vetter tents can be equipped to meet the most strictest demands. More information, viewing the tents with 360° animation and the complete catalogue for downloading can be obtained at: **www.vetter-medical.de**

SMCRescue StayK[®] &

The ever growing demand for the SMC Rescue StayK® (picket system) from all divisions of the Emergency Response Industry, Fire Departments, Rope Rescue, Swift Water Rescue, etc., is due to the fact that all other picket systems are viewed as primitive at best. The SMC Rescue StayK® system is versatile, accommodating, and by far the most effective, efficient, and reliable system available today that

renders all other systems obsolete.

- What makes the SMC Rescue StayK® such a reliable system?
- $\bullet\,$ The SMC Rescue StayK® System's ability to self-equalize and distribute the rescue load equally throughout the system
- allows for maximum holding strength.
- Once installed the SMC Rescue StayK® System can be divided into multiple safety systems.
- The anchor rod size allows minimum natural soil disturbance for increased holding power.
 - Installed anchor rod surface area provides an increased level of the coefficient of friction for strength
 - Installing the anchor rods at a $20\,^\circ$ angle away from the rescue load provide a maximum holding force if shifted.
 - Anchor rod shifting will compact the soil to result in the maximum holding force against the rescue load.
 - The SMC Rescue StayK[®] System design allows easy attachment of additional holding support if needed.
 - Designed by Stan Wiggins, after having worked with instructors and achieved numerous Pro Board Certifications from
 - Texas A&M (TEEX) (Brayton Field), to provide the rescue industry a self-equalizing rescue anchor system
 - SINGLE STAYK COST: \$165. Color: Orange, Grey & Stainless Material: Anodized Aluminum & Stainless Steel Dimensions: 35.1" Tall x 1" Diameter
 - Weight: 9.24 lbs. MBS: Actual break strength is dependant on ground placement, density and composition. See user instructions.

Crossover Carabiner

carabiners are the only aluminum carabiners meeting both the NFPA G-Rating 1983 (2006) and ANSI Z359.1 (2007) strength requirements. The Dual-Lock and Triple-Lock feature the ANSI Z359.1 (2007) gate strength requirement of 16kN making this the ideal choice for fire resuce and industrial operations. The CrossOver gives you the best of both standards without compromising performance, weight or strength. This is the ultimate carabiner series specifically designed to meet all your personal protection equipment requirements. Featuring our new super strong ergonomic single hand frame geometry which allows for easy single handed opening and placement, three gate choices; the traditional Screw-Lock (non-ANSI), Dual-Lock and Triple-Lock autolocking



(meet ANSI Z359.1-2007) and more than a 1" gate opening making this the biner of choice.

Gate: Screw, triple lock, duel lock

Cost: \$30-\$34.

Color: Pewter or Tactical Black Material: Anodized Aluminum Dimensions: 5.53" x 3.25" Gate Opening: 1.05" Weight: 5.5 oz (156 g) 3 Sigma:

- Major Axis 8992 lbf (40kN)
- Minor Axis 3597 lbf (16kN)
- Gate Open 4046 lbf (18kN)

www.smcgear.com

3 STAYK Kit

COST: \$450.

Weight: 28.37 lbs.

ROPE RESCUE

OFF-THE-SHELF TEAM KITS

B

fire-dept or multi-station teams to standardise their approach to rescue and take the headache out of individual purchase decisions. Experienced campaigners would pick the most appropriate items from several different comapnies but with folk like CMC, PMI and Yates you can be pretty sure that the gear being offered is not only appropriate but excellent quality. You'll of course get individuals on the team/station moaning about certain items and saying 'we should have got instead' but from a management point of view you can be happy that your derrieres are covered in terms of buying the correct equipment and the correct proportions of equipment for your teams to enable them to carry out raising, lowering and belaying operations. It is easier to work around these set kits and these companies are happy to customise things if you require a specific descender or harness, or more carabiners, larger snacks bag etc. For this issue we've chosen the CMC & YATES- Team Rope Rescue Kits and as you would expect, they offer very similar fare. Yates has chosen two of its five pulleys as double sheave with becket making construction of com-

hese off-the-shelf kits are a brilliant way for fledgeling teams and

pound pulley systems a little neater and easier. CMC would probably argue that their 5 single pulleys give more flexibilty and offer more deviations or trolley options. Both sets of pulleys have prusik minding profiles because prusiks (and/or purcells) feature in both kits. CMC, as the more expensive and comprehensive kit has included emergency sit harnesses which can be used by rescuer and/or casualty, Yates have opted to leave personal equipment out altogether and list them seperately (of which more in a later issue). CMC has the edge on rope/kit bags and rope protection because, while they both have a large canvas sheet with eyelets and robust wraparound rope protection sleeves CMC also has its NASA-inspired 4-channel flexi edge guard which is both slippery and super-tough. However the Evac organiser in the Yates kit is a great addition. The Yates litter pre-rig is also a good idea providing good adjustability and with the integral Oring collection point it will be impossible for crews to wander off and use the

stretcher straps as anchor straps.Both kits have chosen the 6-bar rack with hyperbar and this is standard for US teams though not so common in Europe. The Yates kit costs \$3322 compared to CMC's \$3871 but this corresponds largely to the different quantities of kit since there is little to choose between them in terms of quality. You can easily fiddle around with the content, CMC and Yates don't care as long as you pay the bill but vou can be confident in their current choices.

1

1000

1x Traverse Titan Rescue Stretcher 1x Sierra Safety Litter Pre-rig 2x 200 ft. 1/2 inch Ropes (any colors) 2x Medium Rope Bags with Shoulder Straps (any colors) 1x Brake Rack 1x Yates TES TEAM KIT Ix Brake Rack 3x Yates Mountain Lite Single Pulleys 2x Yates Mountain Lite Double Pulley Ix Rescue Rigger Rigging Plate 14x Steel NFPA Autolock Carabiners 14x Steel NFPA Autolock Carabiners 4x Sets Tandem Dynamic Prusiks 2x Medium Rope Guards 1x Rope Edge Pad 3x 15 ft. Type 18 Webbing 3x 20 ft. Type 18 Webbing 1x 4 ft. Anchor Strap with Wear Pad 1x 6 ft. Anchor Strap with Wear Pad 5x 9mm Delta Links 1x 2:1 Heavy Duty Pick-off/Transfer Strap Strap 1x Load Release Anchor 2x Bolt and Tool Bags 1x Yates Riggers Gear Bag 1x Yates/Evac Tech Rescue Equipment

CMC TEAM KIT Ix CMC ProSeries S/S Stretcher, Tapered, Frame Only 1 CMC Stretcher Insert, Mesh 2x 150 ft. x ½ in. CMC Rescue Lifeline 2x 20 ft. x 1-in. Tubular Web, Red 2x 12 ft. x 1-in. Tubular Web, Yellow 2x CMC Rescue Anchor Strap, Med* 2x CMC Rescue Pick-Off Strap 2x CMC Rescue Pick-Off Strap 2x CMC Load Release Strap* 1x CMC Rescue Etrier w/Tie-in, Red 1x CMC ProSeries Lifesaver Victim

Harness⁵ 1x 6 ft. x 8 mm Prusik Cord, Green 6x 5 ft. x 8 mm Prusik Cord, Red 1x CMC Rescue Edge Pad, Large 4x CMC Rescue Edge Guards, Large 1x Ultra-Pro 4 Edge Protector 11x CMC ProSeries Screw-Lock Cambinest Carabiner* 3x CMC ProTech Oval Carabiner, Red* 1x CMC ProTech Manual-Lock Ix CMC ProSeries Manual-Lock ix CMC ProSeries 2-1/4 in. Single Lx CMC Anchor Plate, Aluminum* Lx CMC Rescue Rack* 2x Gibbs Ascender, 1/2 in. Aluminum 4x Quick Link, Delta 2x CMC Rescue #2 Rope Bags Lx CMC Rescue Stretcher Pack Lx CMC Rescue Shasta, with Shoulder Ix CMC Pro Stretcher Harness Ix CMC Rescue Patient Tie-In System,

СМС Team

Kit

YATES

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EVENTS

GRIMPDAY 2010

(RESCUE-DAY) Namur - Belgium

Our Man Jim Hutchen again attended this Belgian organised annual rescue event as part of a 5-man team from Hampshire Fire & Rescue so expect a slightly biased report!

Hampshire Fire and Rescue Service's Rope Rescue team has just returned from an international competition with a new addition to the trophy cabinet.Competing against top European mountain rescue teams from countries like Switzerland, Italy and France, Hampshire Fire and Rescue Service

came fourth - the top performing British team - at Grimpday 2010. Grimpday is a multi disciplined challenge where firefighters are faced with the technical rescue of people from heights, or those trapped below ground. This annual event is held in the picturesque city of Namur, Belgium and is an opportunity for European rope rescue teams to come together and share best practice and learn whilst undertaking a timed rope rescue circuit. It is also an excellent training ground for British teams taking part in the UK Rescue Challenge, which is being

held in Hampshire this

September.



Hampshire Fire and Rescue Service has taken part in Grimpday for the past four years and has steadily improved its rankings and is now competing for a place in the top three.

The Hampshire team is also ranked number 1 in the UK after taking gold at last year's UK Rescue Challenge – an event which it is hosting in 2010.

Hampshire's Rope Rescue team leader, Dave Heybourne, said: "Grimpday is always a challenge for UK teams because we are competing against teams from areas where they carry out rope rescues as part of their every day job. So for us to come fourth is a really positive achievement. "Grimpday is an excellent opportunity for all involved and every year we come away having learned something new that we can adapt to our local needs and thereby strengthen the service we offer here in Hampshire."

Grimpday is dedicated to rescuing people trapped in perilous conditions and came about as a means of sharing various techniques used in different countries.

The Hampshire team was made up of team captain Keith Bellamy, Paul Murray, Lee Giffard and medics Richard North and Jim Hutchen. Simon Whelan acted as the team casualty and Dave Heybourne and Alec Martin provided support.



FURTHER INFORMATION

Hampshire Fire and Rescue Service will this year be hosting the UK Rescue Challenge – a national event showcasing the areas of vehicle extrication, trauma care and rope rescue.

This event is the largest of its kind being held anywhere in the world this year and will feature 50 participating teams from around the country with international delegates also in attendance.

Hampshire Fire and Rescue Service's vehicle extrication team are world champions and have managed to attain this position through vehicle donations from the public.

The United Kingdom Rescue Challenge is being hosted at HFRS headquarters from September 30 to October 2 and is being sponsored by Silverlake Autoparts and Packexe Smash.



EVENTS

And more from Jim (and another one of our old TRU buddies Kerry Charlton - see the cover of issues 19 & 21) as they rampaged through the World Extrication competition in Austria this time as medics in the Extrication Team

WRO European **EXTRICATION Challenge**

Once again the Hampshire Fire and Rescue Service Vehicle Extrication team has demonstrated why they are high flyers in the world extrication rankings. Competing at the World Rescue Organisation European Challenge in Austria in June, Hampshire succeeded in winning every title.

This places Hampshire in an excellent position for this year's United Kingdom Rescue Organisation Challenge, which is being hosted by the Hampshire team on their own turf.

Held in Zirl, the European challenge had 13 of Europe's top vehicle extrication teams taking part from country's like Germany, Austria, Sweden and Switzerland. Representing the UK for the second time in three years, HFRS scooped all the main prizes as well as being names the best European Team overall. The results included:

Best Technical Team – Hampshire (Ian Wadmore, Lee Havey, Trev Griffin, Martin Gritt)

Best Team Medic – Hampshire (Jim Hutchen) Best Incident Commander – Hampshire (Steve Barrow) Best Team Overall – Hampshire Fire and Rescue Service

In second place were TRT Monchengladbach from Germany who were initially without a medic for the Trauma Workshop. As a result Hampshire's Kerry Charlton stepped in to help and came second after his colleague Jim Hutchen. Speaking after the event, HFRS Team Leader Watch Manager Steve Barrow said: "Hampshire Fire and Rescue Service has a strong team, with members who have been competing for the past 25 years. We were delighted to win this title and hope we can repeat this success when the UKRO challenge comes to Hampshire



later in the year.

In September, Hampshire Fire and Rescue Service will host the UKRO Rescue Challenge, which will be an opportunity to determine the best British vehicle extrication team from over 50 challenging teams from around the UK. Running from September 30 to October 2, the event is taking place at Hampshire

Fire and Rescue Service's headquarters in Eastleigh. The event has been branded "Hampshire 2010" and has three distinct categories, •Vehicle extrication •Trauma care •Rope Rescue.

In addition to the large contingent of UK fire and rescue services in attendance, there will also be European teams from Spain and Germany competing as guests, in order to share best practice at the highest level.

Hampshire is only able to host an event of this scale with the assistance of Gold sponsors. The Service currently has three Gold sponsors in the form of Silverlake Autoparts in Shedfield, Packexe Smash and BMW, but there are still spaces for more.

For more information about "Hampshire 2010" or if you would like to help sponsor the event visit the Hampshire Fire and Rescue Service website www.hantsfire.gov.uk/rescuechallenge or email the organising team via rescue.challenge@hantsfire.gov.uk

Alternatively for a team entry form visit the UKRO website, www.ukro.org



International Search & Rescue conference

Since 1990 ICE-SAR, Icelandic Association for Search and Rescue, has hosted a search and rescue conference called "Björgun" ("Rescue"). Through the years the conference has developed and grown into a full blown SAR conference with 50-60 interesting lectures in four different halls so everyone should find something of interest. In 2006 it was for the first time held in both English and Icelandic with international participants as well as lecturers.

MAKE THE MOST OF IT..... Rescue 2010 will be held October 22.-24. 2010. Participants will be able to attend pre conference courses at various locations in Iceland before the conference starts and take part in various other activities outside the conference. That way you can make the most out of your visit to Iceland

LANGUAGE

The lecturers will belong to many different nationalities, and the lectures will be held in either Icelandic or English. As a gesture for our foreign guests, the Icelandic lectures will be translated into English, and for our Icelandic guests, the lectures in English will be translated into Icelandic. That way, all our participants should gain as much as possible from the lectures, which they attend.

The conference will be held at Grand Hotel Reykjavík which is a first-class hotel for business travellers, conference guests and tourists who demand excellent service and facilities. **AGENDA**

Wednesday - Thursday October 20. - 21. Pre-conference courses. Thursday - October 21. Evening reception for our international guests. Friday - October 22. Conference 11.00 - 17.00 Saturday - October 23. Conference 09.00 - 17.00 Trade show 11.00 - 17.00 Trip to the Blue Lagoon (19:00) and official dinner at Lava, the Blue Lagoon Restaurant Sunday - October 24. Conference 09.00 - 12.00 Monday - October 25. All day SuperJeep tour with ICE-SAR's most advanced glacier trucks.

SAMPLE LECTURES "Haiti Earthquake" presenters: Gisli Olafsson and Olafur Loftsson 7/7 lessons learned? Presenter: Chris Arculeo Building Urban Search and Rescue Capacity in Pakistan Presenter: Solveig Thorvaldsdóttir Understanding Risk Perception, Informing Behaviour and Improving Resilience: 'Do As I Say, Not As I Do' Presenter: Dr. Brooke Rogers European Union Mechanism for Civil Protection Presenter: Chris Arculeo

GEAR REVIEW

WEBER HYDRAULIK TWIN SAW counter-rotating disc cutter



Dorset Fire & Rescue Service

CRE2326:

663 mm 219 mm 301 mm 9,2 kg EURO €2.250,00 incl. 2 pairs of blades

we are constantly looking at new ideas and equipment to make our job a little easier and more effective.

The use of angle grinders and disc cutters are being looked at and trialled for use at RTC's but there are mixed feelings as to their suitability due to the high level of noise, sparks and control of the tool in confined spaces. These tools have been used for heavy rescue and USAR operations for many years with very positive results.

The tool we have been evaluating is the new Twin Saw from Weber Hydraulik. Its basically a circular saw with two blades that rotate in opposite directions. As you can see from the title picture, it is an electrically powered saw running on either 240v or 110v.

The two blades rotate in opposite directions which greatly reduces kick back on initial tool use and reduces the amount of sparks created.

After using this saw for the first time I was very impressed with it's weight and feel in the hand, its ease of use and that there is very little kick back from the saw. In fact, I'm not sure that there's any kickback - when you apply the blade to a hard cutting surface you expect and anticipate it in your arms and it may simply be that giving the impression of some movement away from the cutting surface. Suffice to say the 'bite' is radically improved over a standard, single blade saw. The reduction in spark's compared to a disc cutter is huge. There is also a diminished amount of flying debris from small shards of metal, it would apear that the

two counter-rotating sets of teeth serve to trap each other's debris and stop it dead in its tracks rather than ejecting it away from the saw blade. That being said, with the correct use of PPE and casualty protection there would is





we used on earlier reciprocating saw blade tests.

As you can seefrom the picture bottom left it managed to cut not only through the B-post but also the seatbelt bracket at the same time. Due to a technical fault we had to leave the cut incomplete, we will hopefully finish this at a later date, the technical fault was not due to the saw. the cut we made was 2/3 of the way through the post.

In conclusion I found this to be a very useful piece of rescue equipment, it certainly will have its place at a car crash scene, especially for the cuts where our other tools fail.

As always we are interested in any feedback you might have from operational or tarining use of this tool so please do not hesitate to drop us an email at info@trescue.com

minimal risk with any of the saws, nice not to have to worry so much though. The saw was able to cut through our standard, decade-old family saloon/sedan with easy, we even tried it on the Mercedes B-post that

AQUATIC PRODUCTS

NRS QUICK CHANGE DUFFEL

This is the best boating accessory to come along in many a year! The NRS Quick-Change Duffel gives you a rugged, ventilating gear bag and a changing pad to protect you from the sticks, stones and stickers of life.

The bag is the NRS Large Purest™ Duffel. 30" Long x 16" Diameter, 6005 cubic inch volume Sturdy 600-denier urethane coated polyester fabric forms the bottom and ends. Heavy-duty mesh in the top allows moisture and odors to leave.

We've backed all the handle stress points with webbing on the inside of the bag so they can't pull out. A removable shoulder strap is included.

The Changing Pad - Here's How It Works:

The sturdy 4-foot diameter nylon pad stows in a zippered pocket in the bag when not in use.

Standing on the pad while getting into your boating gear protects your feet and keeps things clean.



Then, when you've changed at the end of a wet day, just tug on the perimeter cord-lock drawstring and your soggy gear is in a neat bundle and you don't have a single sticker in your feet! **SPECIFICATIONS**

BAG:

6005 cu. in. 16" diameter x 30" long 600-denier urethane coated polyester fabric in bottom and ends Heavy-duty mesh top Reinforced carry handles Removable shoulder strap **The Changing Pad:** 4-ft diameter Sturdy nylon material

Perimeter cord-lock drawcord

www.nrsweb.com

STEARNS SAR VEST

Stearns have taken the Search and Rescue (SAR) vest and added a soft lightweight mesh designed for comfort and ventilation. Soft flotation foam adds extra comfort. Two 1-1/2" encircling belts adjustable chest strap and zipper front Two pockets with hook and loop closure Soft Aquafoam[™] and durable Crosstech[®] flotation foam D-rings for attaching gear Rolled stand-up collar 62 square inches of 3M[™] Scotchlite[™] Reflective Material SOLAS-grade 6755 on panels Minimum 15-1/2 lb. buoyancy USCG Approved Type III" Color: International Orange (ORG) Sizes: S - 3XL cost \$79.99



www.stearnsflotation.com

NRS SADDLE BAG

If there's one item that does it all it's the NRS Saddle Bag- it's a cooler, a thwart bag, a kit holder and a drink holder.

The Saddle Bag has a big front

32 quart capacity Material: 70-denier urethane coated nylon Detachable cup holder Ruler printed on the top of the lid



pocket to hold anything you need close by. Bag straps easily attach to your frame side rail for convenient access. The polyurethane liner and a rigid bottom tray come out for easy cleaning.

Front pocket Straps that loop around your frame's side rails 18"L x 11"W x 12"D Capacity: 32 Quarts

www.nrsweb.com



www.trescue.com

REMOTE OPERATED VEHICLES

POWER HAWK® P-16 Rescue System goes UNMANNED!

Developed with TSWG and Northrup Grumman REMOTEC, the Power Hawk has been successfully integrated onto REMOTEC's highly versatile Andros F6A/B, Wolverine and 5A1 robots for remote spreading, cutting, and crushing operations... Keeping danger at a distance! This new remote capability provides a multi-purpose interchangeable spreader & cutter tool that uses non-energetic methods for responding to various threats and operations including VBIED, PBIED, suspicious packages and devices, hostage rescue, and more. Capabilities include...

For VBIED response: Provide access into vehicles, such as opening truck roll-up and trailer doors, opening vehicle side and rear doors, opening trunks and hoods, cutting vehicle posts and hinges, breaking window glass, etc.
For PBIED response: Cut collars, straps, harnesses, and other device components to remove an IED from a person.

• For suspicious packages and devices: Spread and/or cut open suspicious containers, suitcases, bags, boxes, devices, etc.

• Force open building doors, fences, barred windows, etc. • Cut rebar, cables, etc.

• Lift or move heavy objects. The F6A / Power Hawk Upgrade Kit allows the P-16 Rescue Tool to be set down and released so that the operator can utilize the F6A grippers. The F6A can then re-engage and pick-up the P-16 Rescue Tool for continued spreading and

cutting operations. The P-16 Rescue Tool provides a unique 70-degree articulation of the spreaders and cutters that adds compliance and lessens reaction forces on the robot. This articulation also enables spreading and cutting operations in tight or angled robot positions. Spreader and Cutter attachments can be changed in seconds. The P-16 Rescue System is COTS and can be used as a man-portable tool by simply removing the robot gripper blocks (8 screws) and reinstalling the handles. **www.powerhawk.com**



ROV for **RESCUEnot RECOVERY**?

SeaBotix Inc. of San Diego, California in cooperation with industry leading companies Tritech

> International and Marine Simulation LLC has developed the first specially designed, rapid response underwater rescue system.

Until now remote operated technology has been used to recover drowning victims, not rescue. Improved medical studies have shown that a person experiencing near drowning in water up to 21°C has the potential for rescue. If the victim can be rescued from the water within approximately 90 minutes there is a good chance that the residual oxygen in their body will keep them alive without permanent damage to their vital organs.

The problem has been locating and rescuing the victim in difficult conditions without furthering human risk. SeaBotix Inc. was approached by Derbyshire Fire & Rescue in the United Kingdom to develop a solution to the more than 700 drownings per year. The UK Fire & Rescue has the ability to be on location in response to an emergency in under 10 minutes, however, they are unable to

work below the water. SeaBotix worked closely with the Derbyshire Fire & Rescue to develop a new ROV rescue system that would operate in near zero visibility, in poor weather and strong currents, while being simple enough to operate by res-



cue personnel. The result is a modified LBV system with high definition Tritech Gemini 720i imaging sonar, limb grasping manipulator, video enhancement and a small diameter, low drag tether with a 100kg working load. In addition, the advanced SARbotTM rescue system includes a new high resolution StarFish 990F side scan sonar from Tritech International and a purpose built LBV training simulator by Marine Simulation.

The total package offers rescue teams with large-area search capability and built-in training in a rapid-response rescue ROV. Field trials with the Derbyshire Fire & Rescue proved the ROV system can be setup and deployed in less than 3 minutes providing rescue personnel with time to locate the victim. The system was simplified to reduce technical aspects found in ROV systems requiring care or attention. This allows for rescue personnel to focus on rescue and not setup.

A typical scenario is one where a person has consumed alcohol late at night and decides the nearby water looks inviting. Upon entering the water the person is shocked by the coldness and inhales water. This process leads to filling of the lungs and drowning.



Upon receiving a call, rescue personnel can set up and deploy at the last seen location of the drowning victim. Utilizing the Gemini 720i imaging sonar, the drowning victim is located and the rLBV is navigated to within grasping range. For conditions where visibility is near zero, external ultra bright LED lights and video enhancement are utilized. Upon locating the victim, the specially designed grasping jaws attach to an arm or leg and the rLBV can be pulled back to the shore using it's ultra strong tether.

The SARbotTM is an exciting new technology with tremendous potential for saving lives around the world. The patented and feature patent pending system is unlike anything currently available on the market. **www.seabotix.com**

www.trescue.com

VEHICLES

Rosenbauer Rescue Truck "Crane" Special Vehicle Ludwigshafen Professional Fire Service, Germany

Type: Scania R400 CB 6x4 HSA Enginge power: 400 hp / 294 kW Transmission: GA 867

TECHNICAL DATA:

L x W x H: 9,100 x 2,500 x 3,600mm Maximum permissible weight:

26,000 kg

CAB: Original Scania Crew: 1 + 1 Superstructure: Aluminium Rib ADDITIONAL FEATURES:

•4 quick attack units with 50 m double hose for hydraulic tools •Rotzler Treibmatic TR 080 winch, max. 80 kN, 60 m cable •FASSI F560 AXP hydraulic rescue





crane, max. 572 kN, ext up to 24.8 m, with remote control •Integrated EME 40 kVA gen•4 x 1,500 W pneumatic lighting mast •Access ladder mounted laterally on the superstructure www.rosenbauer.com

SUTPHEN HEAVY RESCUE-ORLANDO FD



Standard and custom features on the Sutphen-built HeavyRescue : • 6-man to 10-man, split-tilt or full-tilt, standard or long cabs with 10-inch to 20-inch raised roofs • Single or tandem axles for maximum support and stable ride • Caterpillar, Detroit or Cummins engines

 Sutphen's own Fort-Truss™ monolith truss design for maximum strength and compartment flexibility

 All-aluminum welded construction for lightweight durability – also available in stainless steel
 Aluminum diamond plate with serrated diamond plate on horizontal surfaces to meet or exceed NFPA slip-resistance standards

 Self-contained hydraulic system with separate hydraulic reservoir driven off the transmission for rescue tools

• Available hydraulic reels and air cascade system for air reels and filling SCBA or SCUBA bottles

• 6kw to 40kw generators (diesel, hydraulic, PTO)

 Available telescoping single or dual rooftop lighting systems provide up to 18,000 watts of illumination

• Multiple compartments with rollout trays, adjustable shelves or tool boards for easy equipment access

• Separate compartments available for dive equipment and diver suit-up • Cabs can also be outfitted with desks, radio banks or as a complete command center including electric side awnings

Emergency escape hatch and rear ladder for rooftop access
Heavy-duty, RV-proven air conditioning system

• Body and chassis manufactured from the ground up and customized by Sutphen craftsmen

www.sutphen.com



TALON® Hazmat robots can be equipped to "plug and play up to seven detection instruments mounted on a quickrelease universal mounting tray including: • Smiths APD 2000 WMD (Weapons of Mass

- Smiths APD 2000 WMD (Weapons of M Destruction) detector.
- BAE Systems Chem Sentry 150C WMD detector.
- Canberra AN/VDR beta and gamma radiation monitor.
- Draeger Multiwarn II industrial
- gas detector. • RAE MultiRAE industrial

 RAE MultiRAE industrial gas detector.
 Raytek Target temperature

 Raytek Target temperature probe.



Save precious lives and valuable time by sending a robot downrange to thoroughly assess a hazmat incident before you commit your personnel.



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REMOTE AREA LIGHTING SYSTEMS



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BACK ISSUES



Issue 31 was one was written arounnd the turn of the milennium and was one of our three flimsiest ever issues (32

pages). It came out in the period we were owned by media giants DMG (Daily Mail Group). As is so often the case when we look back at editorial from up to 17 years ago, much of it could have been written yesterday. Take the Editor's comment in issue 31. We had obviously just been rolled by one or two of the big extrication equipment manufacturers following our Jaguar car destruction derby because they were none too happy at the results. I remember Holmatro withdrawing advertising

because they didn't win all of the categories and Lukas moaning because we had used an older set of their equipment after they failed to provide a set for the tests. My old mate Rob Warmley who was a veteran South African rescue-paramedic and ex-special forces from the dark old days of crossborder operations (unbeknownst to most of his col-



leagues) attended for Holmatro and was more than happy with how fair the tests were. I was ghost writing Rob's rather hair-raising autobiography when he unfortunately took a psychological nosedive and died shortly afterwards. Holmatro lost their fantastically experienced voice of reason in a world of commercial necessity but were sharp enough to go looking in the same place for a replacement. With Brendan Morris and his KwaZulu Natal AEMS-rescue background they again had an experienced and honest fella at the helm and seem to be very much a company you can trust. Much the same as Lyon Equipment with Ben and Graham Lyon from the rope rescue world and indeed a number of the veteran companies like CMC with Jim Frank at the helm and PMI with Steve Hudson - all headed by experienced operational rescuers...there's a pattern there somewhere. Incidentally, good luck to Brendan who's moving to pastures new in Quatar EMS leaving Holmatro with another hole to fill. Anyway, I digress...back to the

_holmatro

Rescue Consulting Canada

NCT Vehicle Extrication Training Fall Arrest Rescue Training

Training, Consulting and Equipment For Police, Fire, EMS and Industry



cover featured another of our old friends JohanDuToit fresh out of South African **Special Forces** and straight into the s@#t of a trench res-

cue course. As members of the Technical Rescue Unit (TRU) we had crews spending Rope Cleaning quite a lot of time in South Africa with AEMS and Police

flimsy issue 31 31 CONTENTS

Minimalist Trench Rescue by Ade Scott **Resporitory Protection & Resus during** Protracted Confined Space Rescues by Brian Robinson

Augers & Limbs Homelite Portable (petrol) Water Pump Mangnum Protector Pro Boots

Smart Medi Memo Book Montane Waterproof Jacket

AA Aeromedical - TVAC - UK by Ade Scott

Rescue and trench rescue seemed to crop up amazingly frequently. So much so that the KZN Technikon

responsible for training AEMS rescue began running full

Trench Rescue courses. So Dave Mihelic and I took a welcome break from a run of very unsavoury and traumatic paediatric incidents and took the course. Back in the far less frenetic and much safer (pre 9.11) motherland we had been training our fire crews in a basic

approach to trench rescue because we knew that as the first on-scene, local crews were far more likely to do

something rather than nothing while waiting for a Technical Rescue Unit crew to turn up. We came up with a minimalist approach to trench rescue that gave the crews proper tasks to implement to help safeguard the safety of the casualty and the crews themselves. We used the example of a terrible South African incident (which I believe we have printed in the magazine at some time or other) where something like 4 or maybe 5 firefighters died after consecutively entering a collapsing trench. Same kind of deal as crews entering a confined space with a non-breathable atmosphere. So our article Minimalist Trench Rescue was an attempt to deal with trench rescue with the absolute minumum of gear. Our main TEAM article in this issue was the Thames Valley & Chiltern Air Ambulance service and our Gear Reviews were on Magnum Pro boots. Montane Jacket, Smart Medi Memo book and Homelite portable water pump. Brian Robinson discussed respiratory support measures for victims of protracted confined space incidents. Oh, and we just about crammed in some incidents involving limbs in augers and an article on Rope Ade Scott Cleaning.



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ROPE RESCUE

The MURKY WORLD of PATENTS and **TRADE NAMES**

> ning UK specialist rescue company SAR Product's ad without updating one of the embedded images. It was their SCARAB descender which we then had to call a SARAB. then a SAR AB and now have to call an A-B Descender by SAR. The reason for all the shenanigans? The introduction a year or two ago of Conterra's SCARAB descender, an admittedly more scarab beetle shaped device than the original SCARAB autolock from SAR Products but nevertheless some time behind the dateline in terms of naming it. However, what Conterra did right and SAR Products presumably simply trusted to fate was to get the name registered internationally. So Conterra were the new upstarts in town in comparison to the original SAR Products SCARAB descender that had been around for years. But coinventor Rick Leipke wanted the name and he got it. Poor old Dave Allport (never thought I'd say that about Dave!) had to jump through hoops to get the product rebadged several times but the version in this picture should now have the definitive name stamped on it. Confusing for those of us outside the USA who are used to thinking of a SCARAB descender as an autlocking, EN compliant device but to US and Canadian rescuers perhaps it's the other way around? I wonder how much money was spent on lawyers for this case?

News item that seemed to take things in good heart:

e got into trouble recently for accidentally run-

In the end what's a name between friends! Apparently some people

think different. History is littered with companies that have been forced to change their names because somebody else wanted to use it and surreptitiously, registered it worldwide first. The most recent high profile case, besides the SCARAB, was The

World Wrestling Federation attempting to wrestle the name WWF

off the World Wildlife Fund. However, they are not very good at

On the SAR Products website was posted a Due to unforeseen circumstances, SAR has once again had to alter the name of the descender from SCARAB to SARAB and now to the A-B Descender. We are extremely sorry for the inconvenience caused to our customers over this problem.

The Conterra SCARAB is a tough little in-line descender capable of accepting twin ropes. For those with a long memory this is very similar to the old Kong Robot which had a floating middle bar and ancillary friction 'ears' -

they may even still make it but we were certainly playing with it over 15 years ago. The SCARAB will suit many US-style rescue systems but is unfortunately unlikely to make it into european rescue systems as it doesn't yet meet any European standards (norms). The A-B Descender on the other hand is a design concept that is familiar to virtually all european rescuers. It operates on 10.5 to 12.5mm (half inch) rope and has a maximum capacity of 300kg so is visibly rated for rescue. We'll no doubt get both descenders in the mag at some point for a proper review but in the meantime we'll give Dave and the newly renamed A-B Descender the last word with all the details straight from the horses mouth:

The A-B Descender conforms to two standards EN12841-C as a Rope Adjustment device (Descender) and EN341-C Descenders for Rescue. The two standards are very different. EN12841-C covers the device only, so that it can be used different types of Kernmantle rope, in accordance with the SAR user instructions. EN341 is the standard for a decent rescue/egress system and any system conforming to this standard must be used with the rope with which it was tested.

Over the past ten years the EN12841 standard has been adjusted to suit the requirements of the users. Testing cannot be done on all rope types, diameters and conditioning as this could take years and the cost be too restrictive, so the user has to understand that each rope used in the device with this standard will give a different reading in test's or feel in use. Some of the problems with other descenders are creep, too sensitive, panic brakes too slow or fast to activate, unable to pull rope through easily or not at all and over complicated design. With the A-B Descender we hoped to have overcome all these with the simplicity of its design. The A-B Descender has had some design changes from suggestions of users of the old SCARAB. A spring has been added to help keep the handle close to the body when not in use, a small bobbin as a rope keeper and the main change is a flip down handle to give extra leverage when required and a finer control in descent.

NOTE: All friction brakes create heat which can damage rope if a fall has taken place or on a long fast descent. Any strength quoted is when the product is new and is in accordance with the appropriate standards.

The A-B Descender has been tested by the notified body in a simulated rescue using a 210kg mass as required in 12841-C 4.4.5 and 4.4.9. It has also been tested with 100kg loaded on the descender and 100kg on a one meter wire sling in a fall factor one scenario which is a more realistic test. Maximum impact force recorded was 5.7kN, max slip on rope was 15cm and there was only slight glazing to the rope. There was no damage to rope or descender. SAR confirms it can be used in RESCUE with a two person load. The A-B Descender also conforms to EN341-C for 20 x 100M descents with 100kg mass using SAR 16 plait 11mm low stretch rope. 12841-C is a far higher standard than EN341, the number of descents and distance is irrelevant. In EN12841-C you can descend as many times as required and at whatever distance. The only ruling factor in this standard is degradation on the descender and rope.

Specifications

• Weight: 442g.

Sample tests:

- Colour: GOLD or BLACK
- Rope: 10.5mm to 12.5mm Kernmantle Max Load: 300kg
- Control: Leaver/Cam + Panic Grab Brake.
 - Dynamic Impact and slip distance 100kg • FF1-1M: 10.5mm = 5.1kN & 51cm, 11mm = • 6.2kN & 26cm. 12.5mm = 7kN & 15cm

• Min. Static Slip: 4.5kN 10.5mm x 22

11mm x 24 • plait SAR. 8kN 12.5mm x 20

plait • Route 44 Singing Rock, 5.5kN

wrestling, and they lost. When ballistic missiles first went intercontinental, they were called IBMs, something a certain computer com-pany did not like at all. And when the EU wanted a standardised Car Assessment Program, they tried CAP, NCAP and NCP all of which landed them in hot water. Tagging the word European at the front to become ENCAP gave them a bit of leverage, as the current owners of the name were broke.

plait Cousin

There is some good news, however. Mopping Floors International can finally have their abbreviation back, now that the furniture store has folded

CONTACT: www.sar-products.com www.conterra-inc.com or www.scarabrescue.com

These two products are at

opposite ends of the descender spectrum, one being a manual device machined out of two pieces of stainless steel or titanium the other being a multi-component, alloy, handled autolock .

www.trescue.com

EN12841-C

Ø10.5 - 12.5 MAX 300kg EN341-B 20x100Mx100kg

○ ROPE

CE0120

09/00322

TECHNICAL RESCUE E-magazine17 27





Texas EquuSearch

Mounted

Anentökutyás t. 1994 FIREBIRD RESCUE TEAM PHOENIX POLICE & FIRE DEPTS

Arizona, USA

TEXAS EQUUSEARCH

ÉLETJEL RESCUE TEAM

South Wales, Hungary

MOUNTAIN RESCUE TEAM

Texas, USA

MOUNTED SEARCH & RECOVERY TEAM



CAYUGA COUNTY

HIGHLAND

AND

BALTIMORE FIRE DEPT DIVE RESCUE TEAM

Maryland, USA

CAYUGA COUNTY HIGHLAND SEARCH & RESCUE TEAM

New York, USA

SOUTH TYROL SEARCH & RESCUE DOGS

South Tyrol, Italy (German-speaking)



S.A.R

Szolnot

DEL NORTE SHERIFF SEARCH & RESCUE TEAM

California, USA



A SCUE SCURD

WILLIAMSON COUNTY RESCUE SQUAD

Tennessee, USA

OGWEN VALLEY MOUNTAIN RESCUE ORGANISATION

Snowdonia, Wales

HEMS SCOTTISH AMBULANCE SERVICE

Scotland



CANADIAN MEDICAL ASSISTANCE TEAMS

Ontario, Canada



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OLYMPIC DAM MINE RESCUE

South Australia



TECHNICAL RESCUE E-magazine17

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CABIN JOHN PARK VOL FIRE DEPARTMENT

TEAMS

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ZURICH FIRE SERVICE

Zurich, Switzerland



US COASTGUARD 14TH DISTRICT Hawaii, USA



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New Zealand



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Abtech Elite two point harness • Quick Connect leg buckles • Breathable Jacket • Extension Strop supplied for use with BA

Tel: 0151 355 5971 Fax: 0151 357 1106 web: www.abtechsafety.com email: sales@abtechsafety.com





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WHAT'S on THE COVER?

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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



MacKay Trophy 2009

[2010: Awarded annually for the previous year) After receiving the Verne Orr award in 2009, presented annually to any US Air Force unit which 'regardless of size, that excels above all others in using its people to achieve the unit's full potential and accomplish the mission' the 33rd Rescue Squadron receives another award. This time four members of the 33rd Rescue Squadron have been named the 2009 MacKay Trophy winners.

Capt. Robert Rosebrough, 1st Lt. Lucas Will, Master Sgt. Dustin Thomas and Staff Sgt. Tim Philpott, the crew of an HH-60G Pavehawk combat search and rescue helicopter "Pedro 16", have been recognized for their efforts saving the crew of a downed Air Force aircraft and three Soldiers in Afghanistan.

The MacKay Trophy dates back to 1912 and is awarded annually by the National Aeronautic Association for the most meritorious flight of the year. The award comes on the heels of the Kadena-based crew being honored by the Jolly Green Association for the most outstanding rescue mission of the year.

The crew of "Pedro 16" and "Pedro 15" came under enemy fire July 29, 2009 during a medical evacuation mission as part of the 129th Expeditionary Rescue Squadron at Kandahar Air Base, Afghanistan. Three Soldiers had been wounded near Forward Operating Base Frontenac when their convoy was hit with an IED. During the recovery operation, the crew of "Pedro 15" was downed and the "Pedro 16" crew, along with Army OH-58 Kiowas crews, helped return the wounded Soldiers and downed aircrew back to safety.

"It could have been any crew in our place that day, and they would have performed the same," Captain Rosebrough said. "(The honors) are a testament to the Air Force rescue community as a whole."

The crew is recognized by Air Force leaders when the MacKay Trophy is officially presented in Washington, D.C. The MacKay Trophy and the Jolly Green Association awards bring even more acclaim to the 33rd Rescue Squadron, which was honored last year with the 2009 Verne Orr Award for most effective use of people and resources in pursuit of the mission.

By Maj. John S. Hutcheson - 18th Wing Public Affairs



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