

#### On a hot Iraq day, platoon commander Brian Chontosh led his Marines toward ad Diwaniya.

e felt the relentless pressure of helmet, body armor and gear as he sat in the right front seat of a dust covered Hummer. Monotony exploded into a deafening roar of zooming RPG explosions, chattering machine guns and popping AK-47s. The Marines faced another complex ambush.

Chontosh barked out instructions while his driver circumnavigated traffic. They came under fire from an entrenched machine gun position and drove straight at it. The young Marine manning the .50 machine gun in the vehicle's turret poured fire into the enemy positions. Chontosh ordered the driver to take the vehicle into the trench line.

The platoon commander bailed out of the Hummer and engaged the first AK-47 bearing man in line. He fired until his M16 ceased feeding ammunition. He transitioned to the 9 mm Beretta pistol that Marines are saddled with and resumed his assault. He picked up an AK-47 and continued his rampage until forced to

transition to another AK-47 to kill more attackers

Another attacking Marine passed Chontosh a discarded RPG. The platoon commander thumbed the hammer down and pressured the trigger unleashing a rocket and shredding another cluster of insurgents. Ultimately, Chontosh's offensive cleared more than 200 meters of trench, killed more than 20 enemy and lead the way to breaking the ambush.

In November 2008, a mere continued on next page

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#### **STAFF**

DAVID MORRIS and "OX"

**CHRIS GRAHAM** www.chrisgrahamauthor.com

JOHN HIGGS

**BETTY SHONTS** 

**Publishers** 

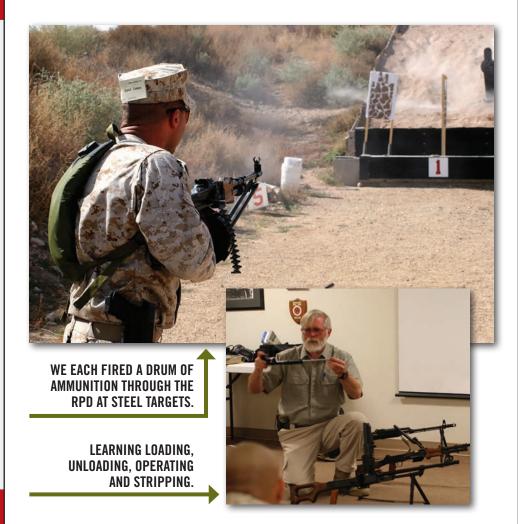
Editor

Copy Editor

**Graphic Designer** 

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squad sized group of Islamic terrorists armed with AK-47s and various explosive devices broke into smaller teams and ran rampant in Mumbai killing at least 164. In September 2013, a squad sized group of Islamic terrorists armed with AK-47s and various explosive devices broke into smaller teams and caused havoc in the Kenyan Westgate Mall killing at least 67. In November 2015, a squad sized group of Islamic terrorists armed with AK-47s and various explosive devices broke into smaller teams, assaulted Paris and murdered 130. Unfortunately, there wasn't a Brian Chontosh at the scene of any of these incidents. But there could have been.

If a modestly armed individual with the will to kill terrorists and the skill to operate their weapons had been present, God only knows how many lives may have been saved. Do you think cultivating those attributes is worthwhile? While it is up to you to choose your mental convictions, Gunsite Academy in Paulden, Arizona can provide the weapons skills. I had the opportunity to attend their Threat Weapons Course several years ago with 1st Recon Bn. (USMC).

At 08:00 on a Monday morning we received a "welcome aboard" brief. Students were introduced to the foreign weapons instructor cadre. After delivering an overview of the Gunsite facility, the product of U.S. Marine Colonel Jeff Cooper's vision in the 1970s, lead instructor Steve Hendrickson delivered a brief on the four rules of firearm safety, range safety rules and the avoidance of lead contamination. He progressed to a lecture on what he called the combat triad: mindset, marksmanship, and efficient gun handling.

At 09:00 we were issued Glock 17,9 mm pistols (a gun common to US government clients and contractors), Blade Tech holsters and four magazines. We drove out to the York range and staged at the 3 yard line. Facing brown camouflage, silhouette targets, we commenced dry fire exercises. We quickly progressed to live fire drills of one and then two shots focusing on trigger control, sight alignment and follow through for smooth reset of the trigger. Before lunch we were drawing and firing, practicing Gunsite's technique of drawing the right-hand to the torso with the fingers in a spider position and moving directly across the body to the pistol grip clearing a concealing jacket incidentally to the movement. Simultaneously, the left-hand snaps flat across the shooter's chest. The pistol moves vertically until the muzzle clears the holster and rotates about the right shoulder to a downrange orientation. It is raised up

until it is intercepted by the leading four fingers of the left hand contacting the front of the right hand grip. In one fluid motion the pistol is produced and projected forward with the sights aligned on target and pressure eliminating the trigger slack. Shooters strived to smoothly break their shots the moment sights aligned on target. After breaking for sandwiches at noon, we were back on the range at 13:00 practicing precision shots from the three, five and seven yard lines. In an irony of desert climate, overcast

 $right: Firing \ the \ RPD.$ 

below: Shooting one of the most popular firearms on the planet, the AK.

cold turned into a rain storm. We adjourned to the classroom for a rescheduled lecture.

Cory Trapp, a former Special Forces soldier introduced the RPG-7 rocket propelled grenade launcher. He explained the history of the Soviet weapon. Still manufactured in Russia. China and numerous other locations, this

sia, China and numerous other locations, this TRADITIONAL COMMUNIST **BLOC WEAPONS ARE STILL** MASS PRODUCED FOR **EXPORT AS WELL AS BEING** MANUFACTURED AROUND THE WORLD. IF YOU ARE

**SERIOUS ABOUT SELF-**

DEFENSE, YOU SHOULD

LEARN THESE WEAPONS.

weapon has been employed by forces in virtually every area of operations. It's been fired at everything from low-flying helicopters and armored vehicles to individual people; sometimes with devastating results. We discussed its' specifications and the training intended for its' most competent operators. Fortunately, many are employed by mediocre terrorists. We discussed the range at which these rockets self-destruct and the minimum designed arming distance. We discussed how to use the complicated looking PGO-7 optical sight and were told that the Chinese and Russian type optical sights cannot be interchanged. We talked about the Chinese type 69 RPG and the often sought RPG 7D (designed to be broken down and concealable). We discussed the characteristics of the PG - 7VL, PG - 7VR, TBG - 7V and OG - 7V rockets available for the weapon.

We were instructed in how to inspect the weapon and rocket; how to assemble rockets and arm them and finally the arming and firing sequence of the weapon system. We concluded by discussing techniques for sabotaging RPGs so that it would kill the would-be gunner. We spent the morning executing pistol drills at the 5, 7 and 10 yard lines. We executed a common version of a "failure drill" firing two rapid shots into targets followed by one round in the brain area. We practiced combat reloads, tactical reloads and malfunction clearing. At 11:45 we adjourned to draw AK-47 type rifles and eat lunch. 10, 15, 25 and 35 yard AK drills were executed. Not the precision weapon that an M4 type rifle is, the Kalashnikov (AK) is generally effectively employed within 100 to 200 yards. In order to keep the pace of training high, we kept the ranges short aiming high to hit approximate 2 inches below the point of aim and simply tightened the standards for shot placement. We practiced magazine changes and malfunction drills. We concluded with a competition on 35-yard steel targets and adjourned to the classroom for weapons cleaning.

Wednesday morning we fired rifle and pistol drills on the same frost covered range. We fired 5, 7, 10 and 15 yard Glock drills. We executed left and right 90 degree pivots and 180s. We executed "failure drills" with AK pivots and shot to the 50 yard line. We practiced prone fire at 100 yards and fired a competition on steel targets at 50 yards.

In the classroom, we were introduced to the Makarov 9 x 18 mm pistol, a weapon described as having use primarily limited to executing prisoners. The small pistol was apparently designed primarily as a badge of status and rank rather than as a tool for combat.

Evgeni Dragunov's 1965 Soviet sniper rifle, the "SVD" was our next subject. Widely distributed and still manufactured, the 7.62 x 54 mm rimmed cartridge, semi auto rifle is not comparable in performance to the currently employed U.S. sniper systems such as the SR-25 and M-40, but with ammo intended for sniper use can perform similarly to some modern "designated marksman rifles." Worth noting is that the issued four power PSO – 1 optical sight contains an "infrared detection aid" that is capable of detecting emissions in darkness such as IR marking strobes and IR lasers used by U.S. forces.

We had access to the "PSL." Externally, it's nearly identical to the SVD and fires the same 1898 7.62 x 54R cartridge. This rifle is also widely accessible in the same circles. Internally it is more similar to a scaled up AK type rifle. They are prolific and deadly in the hands of a skilled opponent.

We returned to the ranges and continued our practical application. We fired the Makarov pistol on close-range steel targets and moved to a range evolution called the "Scrambler."

Individuals were timed moving down a trail and engaging steel targets at stations along the way with their AK rifle. We ran this twice and moved on to the "PSL." Firing a PSL sniper rifle at 100 yards did not take the weapon to the edge of its performance envelope, but did familiarize each shooter with the weapon's characteristics, optics and provide the opportunity to experiment with precision shot placement on a steel target. We practiced some distant Glock shooting at the 100 yard line and called it a day.

Thursday morning was a return to the classroom for a PowerPoint presentation on the PK and PKM belt fed machine guns. These also fire 7.62 X 54R rounds, but from non-disintegrating belts. We talked through loading, unloading, operating and stripping. We discussed the RPD belt fed machine gun, firing 7.62 x 39 mm AK-47 type ammo from non-disintegrating belts. We talked about the

STUDENTS LEARNED HOW TO OPERATE THE PKM AND RPG, AND EVEN HOW TO SABOTAGE THE RPG TO KILL THE ENEMY OPERATOR.

RPD machine gun that also fires 7.62 x 39 mm; basically a long-barrel AK- 47 with bipod that could interchange its' 40 round magazines and 75 round drum with the AK-47 and we went over the AK-74, a 5.45 x 39 mm rifle similar to the AK-47, firing a light round that never attained the AK-47 level of popularity.

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Back at the York range we alternated firing PSL sniper rifles and rotating to the machine gun range. We each fired a drum of ammo through the RPD at steel targets, an assault box of ammo through the PKM at paper targets, a 40 round magazine through the RPK and a magazine of automatic AK-47 fire. We fired bursts through a "Krinkov" style shortbarreled AK similar to the one made famous in Osama bin Laden videos and discovered that despite being the same caliber as the

AK-47, it had much more pronounced kick and muzzle climb. We fired a similarly configured AK-74. We shot the Glock course of fire out to 25 yards twice and broke for lunch. After lunch we fired pistols in combination with moving, stepping in firing and vice versa we did the same with our AKs. We practiced transitioning from AKs to Glocks and we practiced firing on the move with rifles and pistols.

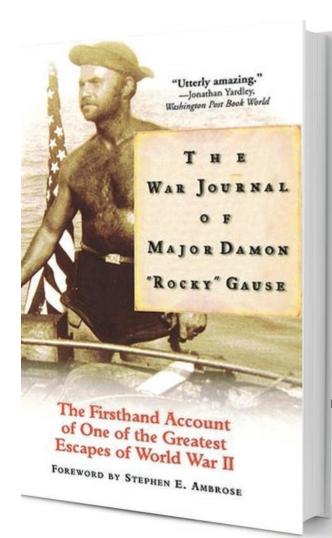
Friday morning, we enjoyed snow and rain. We fired multiple iterations of the Gunsite pistol and rifle qualification courses. We fired AKs kneeling at 50 yards and fired while moving in from the 25 yard line. We ate lunch and concluded the course firing a Glock qualification to 25 yards and the AK qualification to 35. Certificates were handed out in the classroom. We shook hands and departed.

The AK-47 is the most common firearm on planet earth. China and Russia have flooded the world with cheap, rugged small arms. Even today, when their forces use more modern weapons, traditional communist bloc weapons are still mass produced for export as well as being manufactured around the world. Cargo ships illegally packed with these have even been discovered in American ports. If you are serious about self-defense, you will seek out and learn these weapons whether you spend time travelling abroad or not.

#### BIO

Chris Graham is a former Force Recon Marine and the former commander of a military Anti-Terrorism Unit. He is a consultant for U.S. Government agencies providing weapons and tactics training in the U.S. and sustainment training in international "bigh-threat" zones. He is editor of The Journal of Tactics and Preparedness and creatorof 30-10 (at home) Pistol Training... "30 days to join the top 10% of shooters" (www.3010pistol.com/recon).

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# THE WAR JOURNAL OF MAJOR DAMON "ROCKY" GAUSE

**REVIEWED BY: JOHN STEVENSON** 

Damon "Rocky" Gause was a boy from Jefferson, Georgia who had a heart for adventure and the never-say-die spirit that has defined exceptional human beings throughout history.

Rocky Gause was stationed in the Philippine Islands shortly before the outbreak of World War II. When the war began, the Philippine islands fell to the Japanese who took an estimated 70,000 American and Filipino prisoners. After being taken prisoner, Major Gause, "quickly decided that a Jap prison pen was no place for me." He was a decisive man who could assess his situation and formulate plans as he went. He almost immediately escaped from the makeshift POW camp by killing a guard and swam several miles to Corregidor.

So began an adventure that would take a man with no special training in survival skills or operating small boats on a 3,200 mile trip by boat from the Philippines to Australia. He and his companion, Captain William Osborne, using only what they could beg, borrow or

steal along the way, survived the journey through Japanese controlled waters and islands in a 20-foot wreck of a fishing boat.

Rocky and Captain Osborne island hopped through their journey using an old National Geographic map and a hand-held compass to navigate the entire way. Fortunately, Major Gause was trained as a pilot which aided them in the navigation of their voyage. The duo were kept out of harm's way because, "All along the route the natives kept us informed of the goings and comings of the Japs, so that in most cases we were able to avoid

areas or islands that were dangerous." Operating in friendly areas has definite advantages.

Being able to bluff effectively was also important along the way. Gause and Osborne, at different times, impersonated Japanese soldiers, boarded and looted other much larger and well-manned vessels at gunpoint and put entire villages of natives to flight by hoisting a makeshift Japanese flag. Throughout their journey there were many encounters with Japanese naval vessels who simply overlooked them because they were flying their homemade Japanese flag.

AT DIFFERENT TIMES, HE IMPERSONATED JAPANESE SOLDIERS, BOARDED AND LOOTED OTHER MUCH LARGER AND WELL-MANNED VESSELS AT GUNPOINT AND PUT ENTIRE VILLAGES OF NATIVES TO FLIGHT BY HOISTING A MAKESHIFT JAPANESE FLAG.

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# "THE ONLY POSSIBLE CHANCE HE AND I HAD OF GETTING OUT ALIVE WAS TO WORK TOGETHER. THEREFORE, NO MATTER HOW MANY AND HOW FIERCE THE ARGUMENTS, THE JOB BEFORE US ALWAYS CAME FIRST."

The two Americans also had to put aside personal problems and the traditional rank structure in order to accomplish their mission. At the time of their escape, Major Gause was Lieutenant Gause and he was outranked by Captain Osborne. However, Gause was a bit more familiar with boats. Therefore, while at sea, the lieutenant gave the orders to the captain. As Gause put it, "My mate had an understandable resentment about taking orders from me, but he realized that the only possible chance he and I had of getting out alive was to work together. Therefore, no matter how many and how fierce the arguments, the job before us always came first." It's a good lesson for survival situations and life in general.

At a later point in their voyage, Rocky demonstrated the value of knowing and being aware of his surroundings. He and Captain Osborne had just looted a village, when they came across a small pig. Rather than kill

and eat it, they decided, based on Rocky's knowledge that the local islanders were all Muslims, to keep the pig and name him Joe. "The natives on the islands we were covering were Mohammedan, and believed that if they touched it, much less ate it, they'd wind up with a one-way ticket to Hell. Whenever we ran short of supplies and located a village without Jap soldiers, we'd sail into the harbor, give Joe a few well-placed kicks, and his squeals at the pitch and tone that only a pig can reach, would ring out valiantly. Then, we would go ashore, assured of absolute privacy." In this way, the two Americans were able to keep supplied during this part of their trip.

The War Journal of Major Damon "Rocky" Gause is a gold mine of lessons for survival and examples of the survival mindset. These men persevered through typhoons in the open sea, being strafed by a Japanese fighter plane and privations and dangers that would have overwhelmed most people. But through

it all they kept their minds focused on the task in front of them while always moving towards the ultimate goal of reaching Australia.

While reading this book I found it instructive to keep in mind that neither of these men had been specifically trained in most of the skills that they found necessary to employ to survive. Major Gause was the more experienced boat handler of the two and he had only been handling boats for a couple of months, while Captain Osborne had no experience with boats at all. It was mindset combined with basic skills that led to success.

Whether you are looking for a survival guide, a great historical account of WWII or a fascinating adventure story, this book will not disappoint.

#### BIC

John Stevenson is a former police officer, U.S. Border Patrol agent and Federal Air Marshal.

## **GEARREVIEW**

#### PARABEN'S STRONGHOLD BAGS

Paraben's StrongHold bags are designed to block out wireless signals from cell towers, wireless networks and other signal sources that threaten digital evidence. These economical bags are designed to prevent incoming communications from contaminating evidence (e.g. seized smart phones, etc.) or receiving "wipe" commands. They can also protect the security of your own phone when applied. The triweave material used in the Wireless StrongHold Bag is made of a nickel and silver plated nylon plain woven fabric. This fabric and design are the key in preventing unwanted signals emissions or reception. www.paraben.com





BY: DR. BRANDEN R. WILLIAMS

I like to joke that I do my Christmas shopping all year long, but the reality is, I'm usually scrambling in December for a few last minute items.

'm entering into a string of gift giving occasions that starts with Christmas and ends with Mother's Day, where it is my job to make sure that my wife knows how lucky I am to have her.

Many of us have someone in our lives who is difficult to buy for, be it the guy who has everything or someone who is extra special in our life. If they happen to be security or privacy conscious, I have a few ideas for gifts for those folks.

#### **WALLET PROTECTION**

Frictionless payments is a buzz-phrase popular among payment professionals. Studies of human behavior have led product makers in the space to find all kinds of creative ways to remove steps that buyers have to go through to pay for goods and services. You might even say that they are consciously removing all the mental gates that might cause someone

to think about a purchase so they can get to the "buyers remorse" stage as quickly as possible. Banks are constantly competing for you to choose their card first—so called, "top of wallet" choice—because they make money every time you purchase something. As new products become available, banks will invest in putting these products to use in their portfolio so that you will hopefully prefer the easiest method to check out.

Two big examples of this that you might use today are the Radio Frequency Identification (RFID) chips that sit inside of some plastic payment cards and of course, the Apple Pays and Samsung Pays of the world. Several years ago, some of the payment networks licensed technology that leverages the EMV standard (the same standard that drives that fancy chip you now are getting in your credit cards) to do contactless payments. Meaning, with the right technology in the card, I can just wave it over the reader and it will transmit the information required to process a transaction. It's incredibly useful, but can be a bit scary as well.

RFID technology is used all over our society today. In its simplest form, circuits are printed with antennas that will energize the electronics when they are near the right kind of signal, no batteries required. If you have ever walked out of a major retailer and one of those alarms starts going off because they think you are stealing something, you have seen RFID technology in action. Other uses include toll passes that you stick on your windshield, the chip inside your passport and some ignition keys in previous generation vehicles that, as an anti-theft mechanism, required the RFID chip to start the car. It's a very useful setup as it is cheap to manufacture and cheap to operate. Unfortunately, the technology is simple to abuse.

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Several years ago, security researchers revealed how easy it was to grab information off RFID chips used in various applications. They took it one step further and demonstrated how to break the weak encryption used in certain applications to protect some of the data. If you search around, you will see examples of broken Exxon Speed Passes, Passports and ignition keys for cars. The attack is getting easier to pull off every day with smaller devices and lower power requirements. So much so, that someone could sit next to you on a train or in a waiting room for less than five seconds, energize any of the cards in your wallet and grab any data that the cards give up. Unlike Apple Pay or Samsung Pay, the RFID chips in your credit cards simply respond to the energized signal and do not require any additional input from you to transmit their information.

It's a little scary, but it is more sensationalized by the news than it probably needs to be.

There are ways to prevent this from happening. What you need are RFID blockers that come in the form of mini-Faraday cages built into sleeves for your cards or even into your wallet itself. Both are readily available from your favorite online retailers. For examples of the wallets, check out ID Stronghold (www.idstronghold.com) who claims to have the original RFID wallet on the market (*Ed: see page 6*). Their product lines include wallets for men and women, as well as sleeves that will work for single cards.

#### **FARADAY BAGS FOR PHONES**

In a previous article I mentioned how different organizations, whether they are government sponsored or not, can track your movement via your cell phone by using fake cell phone towers. The only way to ensure that your phone cannot communicate with the outside world is to block the signal using a Faraday bag. Just like with your RFID cards, you can prevent your phones from communicating by wrapping them in a bag laced with a metal filament that prevents signals from passing through. It's called a cage because it is typically in mesh form of some kind. If you have friends who want the ability to disappear off the grid (minus getting pegged on CCTV that is), a Faraday bag for their phone is an easy gift. I found a ton of these on my favorite e-commerce store, so you should have no problem getting one for your loved one.

#### **SECURITY CAMERAS**

Twenty years ago, you would truly be labeled as crazy if you outfitted your home with expensive security cameras. Today, it's almost a necessity as we deal with errant mailmen, abusive package delivery services, copper theft from A/C condensers and the occasional burglary situation. Just last year, my father suffered a theft when someone climbed his fence and stole a television off of his back porch. You had better believe he's got cameras covering his property today.

Camera systems come in a couple of different forms, but most require a power source

and have a small battery backup included in the device. Almost all of them have cloud services bundled in that allow you to store images or video securely off site in case you need them. These systems are not cheap. However, there are some systems that work well inside your property that can be quite affordable. For example, DropCam and Canary are two cool products that have become very popular in the last year or so. There are also battery-only camera options, but my personal experience is that the quality and reliability are much lower than a wired version.

#### DASHBOARD CAMERAS

You don't need to live in Russia to take advantage of dashboard cameras. You can see crazy things happening right here in the USA too. Dashboard cameras have tons of great uses for regular citizens. Accidents happen and they are not always your fault. Imagine if you had a visual record of an accident that either happened to you or to a car near you. Some individuals believe they can scam insurance companies by stopping on a road, putting the car into reverse and backing up until they hit you. More adventurous individuals try jumping on to your car and bashing their head against your windshield to make it look like you hit them. Dashboard cameras have foiled several such scams. Again, check your nearest search engine for some shocking videos.

These devices are merely for your protection, to create a visual record of things that happened while driving. Don't forget that it

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THERE ARE NUMEROUS DASHBOARD CAMS AVAILABLE, SUCH AS THIS DISCREET ONE MADE BY I-MAX.

could also be used the other way around if the right parties discover that it is present and recording.

#### **BUG OUT BAGS WITH POWER**

If you don't have a basic Bug Out Bag built and ready to go, you are going to be scrambling in the event that you need to get out of a situation quickly and have some self sufficiency for a few days. Common items include survival gear, first aid kits, cash, nourishment and water. Most of us hope that we never have to use the bag, but we enjoy the peace of mind we get from knowing it is there in case of an emergency. In the same way that you change the batteries in your smoke detectors when you change your clocks, you should also take a look at the elements of a Bug Out Bag and make sure they are still current and relevant. For example, if you do not have a way to charge a cell phone or tablet in your Bug Out Bag, you might be out in the field with a dead phone. Even in a time of crisis, a phone can provide lots of tools including GPS tracking, light and text messaging; often the only way you can get comms in and out of a disaster area. Portable batteries are getting better and more powerful with every year. Consider one of the many bags with integrated power solutions or consider buying just the power pack.

#### ADDITIONAL READING:

For more information on how interchange (how parties that process credit cards make money) works check your local search engine (such as DuckDuckGo.com, a search engine that doesn't track you) for "how interchange works" to see who makes money on different parts of a payment card transaction. The bank name printed on the card makes the most and it's often paid for exclusively by the place where you used it to pay for your goods and services.

To learn about some fun attacks on RFID and payment cards, check out this blog at http://j.mp/OiVSGw for more info. ✓

#### BIO

Branden R. Williams, DBA, CISSP, CISM is a seasoned security executive, ISSA Distinguished Fellow and technology executive sought after by global companies to consult on their digital business initiatives. www. brandenwilliams.com

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■ BY: KELLY ALWOOD / PHOTOS COURTESY onPOINT TACTICAL www.onpointtactical.com

#### The need for procuring protein is a top priority for human survival.

hen all goes as planned, we are prepared and have with us the necessary equipment to provide for our basic survival needs when we wander into the wilderness. However, real life always seems to employ Murphy's Law at just the wrong time.

Traps have been used and perfected for millennia for obtaining animals for their food and other resources. Nature actually provides all of the essential materials needed to build these machines. As with everything else, the more resources that you have with you, the easier and faster you can construct these tools. If you have only two items with you, a fixed blade knife and cordage would make life much easier. Cordage is essential for many survival chores. Obviously, man

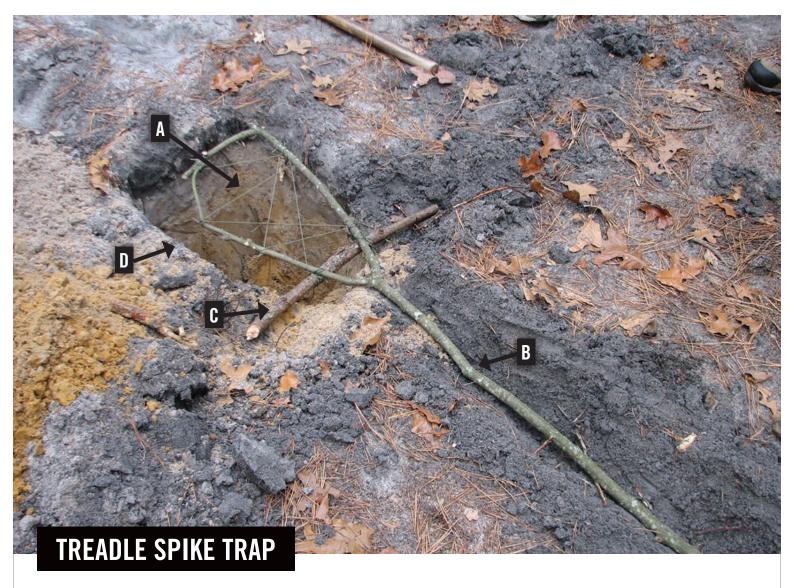
made his own cordage in the wilderness. This is still a viable solution; however it requires a lot of time in the field and lots of practice beforehand.

My preference for survival cordage for trapping is a spool of embroidery thread. It is inexpensive, weighs almost nothing and is tiny enough to put in your front pocket. It is also strong enough to build heavy deadfall traps and is so thin and camouflaged that it becomes nearly invisible when employed. There are many other options for cordage. Many people use 550 paracord as well as other types. All of these can work and have many uses, but they are not optimal for building traps. If you find yourself without proper cordage, think about what you have on you that you could make work. Shoe-

strings,T-shirt cut into one long strip, fishing line ... anything. I emphasize cordage because if you cannot make it efficiently out in the woods, then you must bring something with you.

Traps are ambushes. They are placed and left to work while you are gone doing other necessary survival chores. They are like automated remote hunters for you and are therefore very efficient as a way to procure food. An ambush works by knowing your quarry and when and where they will be. Having visual tracking skills makes it much easier to choose the correct location for your traps. You can know the direction of travel, the exact foot placement and the size of the animal that you are setting the trap for. Many animals tend to use the same

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trails. From raccoons to deer and everything in between, many will use that same path because they are well worn and provide the path of least resistance. Small paths, aka "runs" are specific to each animal. Being able to recognize them will enable you to design and set the appropriate trap. For instance, you wouldn't want to set a raccoon or rabbit trap on a trail where a deer will trip it and disable your machine.

There are three parts to a trap. Understanding this will help you employ them properly and even allow you to modify and invent your own to adapt to different circumstances. Each trap has a trigger, engine and weapon. The trigger can take many forms and is what actuates the trap and sets events in motion. The engine is what gives the trap the energy or power to move the weapon. This can be the animal's own body weight, a bent tree limb, a counter weight or many others. The weapon is the part that actually traps and injures or dispatches the animal. Without the weapon, the trap is

just a scare tactic with no benefit for food acquisition.

We will now look at a very simple and effective mechanical trap called the Treadle

spike. This is very fast and easy to construct, requires little resources and is highly effective. This trap can be scaled to work on anything from rabbits to deer and humans. This trap uses the quarry's body weight as the trigger and engine. A spike or set of spikes attached to the pole of this trap is the weapon. Everyone has heard the saying, "enough brains to tan their own hide" and that is true and comes from the old days of brain tanning fur.

The same is true with these types of trapsevery creature has enough weight to activate and power these effectively. The application is very simple: you construct a "snow shoe style" loop (Arrow A), attach a long pole with spikes (Arrow B), and a cross stick to make it a lever (Arrow C). The round part will be placed over a hole that you will dig

(Arrow D). The cross stick will span across the hole and the pole will lie on the ground, lightly covered and camouflaged. The idea is for the animal to step on the round (snow shoe; Arrow A) part of the machine, its body weight will push the round piece down and send the pole with spikes flying up at the prey with great force. This works like stepping on a rake and getting smacked in the face as we have seen in cartoons (if you haven't

personally experienced it.) The force generated by this trap is very powerful. In a class, I had students build them and step on them (pole having no spikes) holding a broom

BEING ABLE
TO RECOGNIZE
ANIMAL "RUNS"
WILL ENABLE
YOU TO DESIGN
AND SET THE
APPROPRIATE
TRAP.

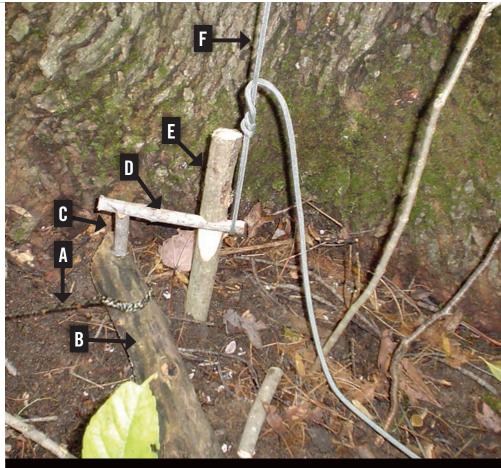
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handle in front of them for protection. All were stunned by the force generated and in several of the traps the poles hit the broom handle with such force that it broke the handle and still smacked them. These traps have been used for thousands of years for procuring game and were also used extensively in the Vietnam War against American soldiers very effectively. The advantages to this trap are that it requires little resources and time to build and employ.

The second trap we will discuss is the Apache limp wire trip deadfall trap. As the name implies, this trap was used and perfected by the Apache Scouts of North America. This trap is more complex. It requires more time and resources to build and you must do some handy knife carving work. The benefits of the trap is that it is highly effective, has many trigger options and it features many weapon options as well. It is highly versatile and can be placed almost anywhere. This trap is triggered by a trip line. Other modifications can be made to alter the trigger mechanism, making it even more diverse for your particular environment and prey. For this article we will focus on the trip wire trigger. As suggested in the name, the trip wire is not taught or tight, it is in fact loose or limp, making it even harder to see and detect and also lets you adjust the timing of the trap to impact either the first or second

quarry that is there. (See Arrow A) The engine is a counterweight. This is what gives the trap the power to deliver the desired blow or impact to the prey. The weapon is whatever you decide is the most appropriate for the prey you are after. Some options include logs, logs with spikes and rocks. As seen in the picture, the trip line is strung across the path and attached to a small stick. This stick (Arrow C) is simply cut flat on both ends and stands vertically. This piece must have something underneath it to make it work smoothly and reliably. This could be a small flat stone or a piece of wood (Arrow

B). Placed on top of the vertical piece is a 4-5 inch horizontal piece of wood that had a flat side carved into it (Arrow D) that mates



#### APACHE LIMP WIRE TRIP DEADFALL

with a flat spot carved on the other vertical piece (Arrow E). Now we see that the cordage holding the deadfall above is attached to

THESE DEVICES

ARE SIMPLE TO

CONSTRUCT.

**BUT AS WITH** 

ALL SKILLS. IT

IS MUCH EASIER

TO DEVELOP

**PROFICIENCY** 

WITH THEM IN

**COMFORT BEFORE** 

THEY ARE NEEDED.

RATHER THAN

WHEN HUNGRY.

COLD, WET OR

**OTHERWISE** 

DISTRACTED.

the horizontal stick D. This rope simply goes up along the tree and loops over a branch attached to whatever deadfall device you decide to use.

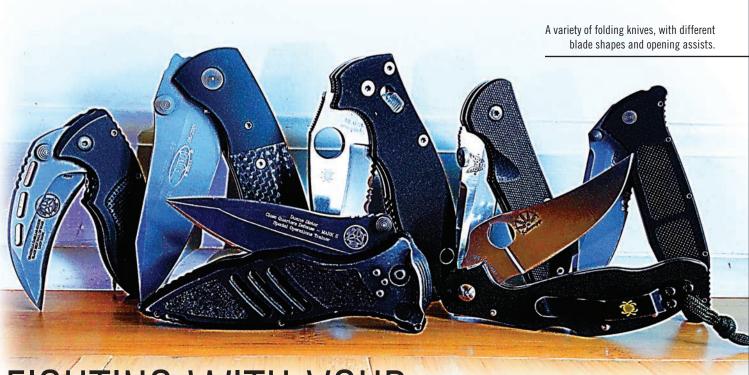
This trap is very effective, quiet and smooth. Once used, the pieces are not normally damaged and can be easily set again for the next prey. You will want to set this up and test it several times before expecting to master the construction and timing. Once you get it, it sets up in minutes and is quite versatile. When teaching students how to do these, we have them use basketballs and other non damaging objects as their deadfalls

to test them and perfect them. Any pieces of traps that betray noticeable evidence of your work can be camouflaged by smudging with smoke or mud. It is always best to minimize the amount of scent you get on the trap's components and evidence of your presence setting it up at the trap location. It is best to build somewhere else and then emplace at a scouted ambush location.

These devices are simple to construct, but as with all skills, it is much easier to develop proficiency with them in comfort before they are needed, rather than when hungry, cold, wet or otherwise distracted. Safety must be a primary concern for the builder. It is your responsibility to confirm the legality of the type, location and application of any trap you build.

#### BIO

Kelly Alwood bas served as a security consultant in Southeast Asia, and Southwest Asia including: India, Iraq and Afghanistan. He provided security services in support of Hurricane Ike, Hurricane Gustav, Hurricane Katrina and the Asian tsunami. He is a partner in OnPoint Tactical, and provides instruction in urban escape and evasion, tracking and survival. www.kellyalwood.com.



# IN 113 LIMP LOTINENT, IT DOESN'T MATTER HOW COOL LOOKING THE KNIFE IS, OR WH

IF YOU AREN'T **TECHNICALLY AND** TACTICALLY PROFICIENT IN ITS EMPLOYMENT. THE KNIFE IS, OR WHAT BRAND OR MAKE IT IS.

■ BY: ANDREW CURTISS

#### Imagine you're downtown with your significant other during the Christmas season.

s you stroll down the streets perusing the various shops and enjoying the ambiance of the season, you happen to notice that you are being followed by two suspicious individuals. You casually stop at the store front of a local shop to point out some of the work on display and to subtly get a good assessment of the situation that seems to be developing. The men are within 20 feet of you and seem to be approaching progressively faster. Within 15 feet you notice one of the men sweeps his over garment to the side only to reveal a handgun in the waistband of his jeans. You're facing two attackers; one definitely has a gun and you are unarmed ... Or are you?

You suddenly remember that you are carrying a tactical folding knife or a "Combat Folder" as they are commonly referred to. You know that within the range of the gun

wielding attacker that you can effectively disable him and create an opening for escape. This is when all those repetitions of practice draws might finally pay off. That is, of course, if you are one of the small percentage of people out there who actually practice deploying their knife. The fact is that there is a growing percentage of people who are choosing to carry a combat folder. The vast majority of these people carry the knife for good reasons, though many fail to fully appreciate its value as a self-defense weapon. The first reason it is valuable is because in many cases it doesn't require any special licensing or permits to carry. In addition, it is generally easier to conceal than a firearm (it is smaller and lighter), it is legal to carry (with restrictions) in almost every state and a knife serves multiple purposes.

The problem that many people have is

that they just aren't educated or trained in exactly what type of knife to carry, how and where to carry it or how to employ it. These simple subjects are where the proverbial rubber meets the road. If you aren't technically and tactically proficient in its employment it doesn't matter how cool looking the knife is, what brand or make it is or even how many extra features the knife has, It is important to understand this weapon from the perspectives of both an attacker and a defender.

#### WHEN TO EMPLOY

Employing a knife in a self-protection scenario is a serious matter. Because of the nature of the weapon, its application will cause serious bodily injury or death. That means that deadly force must be justifiable in the eyes of the law. The first thing that I generally teach trainees is to have a firm understanding of the

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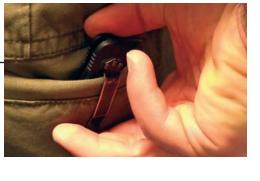




above: Drawing the folder from the front waistband. right: Drawing the folder from the back pocket.

**CAROTID** 

use of force and escalation of force considerations. The ability to identify and articulate the perceived threat and how to mitigate or neutralize the threat is fundamental. Not only is it imperative in order to make a speedy decision which may save your life, but it is also necessary to protect oneself from legal and civil liability. The importance of understanding the capabilities and the legalities of your self-protection weapon of choice cannot be overstated. When it comes to carrying a knife one must understand the legal definition of deadly force in your jurisdiction. Deadly Force generally and quite broadly can be defined as any amount of force which causes serious bodily injury or death. Any employment of a combat folder will cause either of these and therefore the employment should only be applied when the totality of circumstances leads a "reasonable person" to believe that they are indeed facing the threat of serious bodily injury or death and escape is not a safe option.



THE ARTERIES
CARRY THE
MOST BLOOD
THROUGHOUT THE
BODY, AND MAKE
EFFECTIVE
KNIFE TARGETS.

MAJOR ARTERIES

#### WHERE TO ATTACK

Assuming that you have identified the threat as being actively hostile and that you must defend yourself with deadly force, you need to know which parts of the anatomy to attack. In my first book, Combat Application Techniques: Principles of Destruction, I start the chapter on Pressure Points and Vital Targets with a quote from the movie, "The Karate Kid." At one point, the bad guy John Kreese is coaching his minion to fight against "Daniel -san." He is teaching him to strike vital areas that shut down the attacker through the use of mechanical failure. The quote that I used and also find most applicable is this: "If a man can't see; he can't fight. If a man can't breathe; he can't fight. If a man can't stand; he can't fight. What the bad sensei was referring to was attacking targets that mechanically shut down the anatomy. For example, to affect someone's ability to see, you could attack the eyes. To attack one's ability to breathe, an attack to the nose, throat or sternum may suffice. Understanding the human anatomy is extremely important. When it comes to edged weapons, the things that affect one's ability to see, breathe and stand--or even better-to move, are attacking veins and arteries, tendons, ligaments and organs.

Blood carries oxygen to the body and by cutting the channels which transport blood you are essentially depriving a person of oxygen. The arteries carry the most blood which is freshly oxygenated and comes directly from the heart and therefore are the most efficient in causing one to be drained of blood when attacked. Attacking these arteries affects one's ability to see, breathe and stand or move.

#### SOME OF THE MAJOR ARTERIES ARE:

- Carotid located bilaterally on each side of the neck
- The Subclavian located in the plural cavity between the throat and collarbone (Clavicle)
- Axillary located in the armpit cavity
- Brachial located on the inner arm above the elbow
- Femoral located on the inner thigh and groin

Attacking the tendons and ligaments affect one's ability to stand or move. The tendons and ligaments of the body affect the strength and stability of the joints. If you are able to successfully attack the tendons and liga-



(but visible) their pocket. They may choose to carry the knife in their waist band with an over garment on top if they want to keep it concealed. Beware that overtly carrying is alerting to predators and nullifies part of the advantage a knife can provide.

The most important part of carrying an edged weapon is the actual ability to use it. This means that practice and rehearsals.

the subject wants to keep the weapon concealed, they may carry it overtly attached in

The most important part of carrying an edged weapon is the actual ability to use it. This means that practice and rehearsals (from a consistent carry position) are of the utmost importance. Here are some common places to carry your combat folder blade:

- Clipped into the strong side pocket or the pocket on the side of the hand intended to draw the weapon.
- Clipped into the waist band.
- Clipped into the back pocket (Works well with tactical pants)

There are different types of opening mechanisms. Some knives can be opened automatically with a push of the button and are often referred to as automatic or switchblade opening knives. If you choose to carry a switchblade or automatic knife you should make sure to check local laws and regulations regarding the legality, as they are not legal in all states. They sometimes have strength problems based on their design.

Other knives are spring assisted knives which utilize spring tension to aid in quick opening of the knife. Again, one should be sure to check local and state laws regarding the carry of such knives. There are also standard folding knives which in many cases can be opened with the use of a single hand and swift drawing using inertia.

#### **GETTING A GRIP**

There are various methods for gripping the Combat Folder. Each grip has a specific purpose and specialty for its application. However, each grip also has its own constraints. I recommend implementing the "Saber Grip" with the Combat Folder. The Saber Grip is the most versatile grip and also allows for the use of the most attack patterns. The Saber Grip also allows the handler to use both the tip and blade of the Combat Folder whereas other grips limit the application of the knife. The following grips may be used when handling a Combat Folder.

- · Saber Grip
- Hammer Grip
- Reverse Hammer Grip
- · Ice Pick Grip

ments, then you can immobilize the attacker. One deep slice into the tendons above or around the wrist and the attacker becomes limp wristed. Cut the ACL or MCL ligaments surrounding the knee and they will collapse under the weight of their own body. The following areas are susceptible to tendon and ligament attacks by edged weapon:

**EACH GRIP** 

**SPECIFIC** 

**SPECIALTY** 

**FOR ITS** 

**PURPOSE AND** 

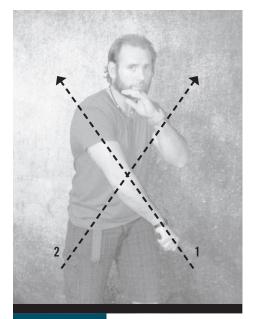
APPLICATION.

HAS A

- The interior and anterior of the elbow
- · Above and below the elbow
- The radial (thumb side) and ulnar (pinky side) of the wrist
- The knuckles of the hands
- The interior and anterior knee
- Above and below the knee
- · Achilles tendon of the ankle

#### **EMPLOY YOUR BLADE**

It's one thing to understand when the right time to employ your blade is and where to attack. It's a completely different thing to know how to draw your combat folder and attack the targets which are most susceptible to attack. For that reason, employment can be broken down into two categories; the carry/draw and the attack. The carry of the combat folder is based on what it is that the person intending to carry the knife wants to accomplish. If it is irrelevant as to whether



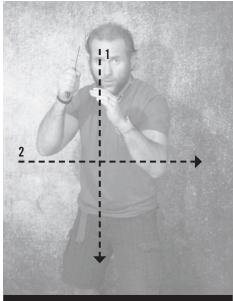
#### X ATTACK

#### ATTACK AND DEFEND

Once you have swiftly drawn your edged weapon (after having developed an efficient, consistent drawstroke that can be conducted under pressure) it's time to protect yourself. The best defense is a good offense. For this reason we will discuss the concept of "Attacking the attack." The act of actually engaging your attacker's offensive technique is one of the most effective proactive means for self protection if you have not been able to act before your attacker attacks.

Before we go in depth on the various attack patterns, let's first cover "basic fighting stance" and "guard" postures. Everything starts with a good stance. The ideal stance would be a modified isosceles stance. This can be achieved by standing with feet shoulder-width apart. One's support side (aka "weak" side) foot is

slightly forward with the heel of the lead foot being in line with the ball of the strong side foot. Toes are pointing directly at the target, the knees are slightly bent, the hips and shoulders are squared to the threat. Hands are up. Commonly, the hand wielding the knife (which is referred to as the strong side hand) is slightly to the rear. The elbows are in protecting the ribs, internal organs and Axillary arteries. One's chin is tucked to reduce recoil from incoming strikes and to protect the throat and neck from any type of attack.



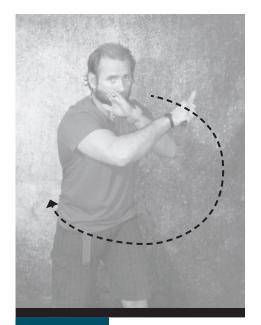
#### T ATTACK

The lead hand (non-weapon wielding hand) is generally known as the checking hand. The checking hand is used to parry, cover, strike and grab. The hand wielding the combat folder is known as the cutting hand. Both the checking and cutting hand should be used in conjunction with one another in order to incapacitate the attacker or to mitigate and neutralize the threat effectively. There are a limited number of attack patterns. The directional attack pat-

# THE IDEAL STANCE WOULD BE A MODIFIED ISOSCELES STANCE - FEET SHOULDER-WIDTH APART, SUPPORT SIDE (THE "WEAK" SIDE) FOOT SLIGHTLY FORWARD WITH HEEL OF LEAD FOOT IN LINE WITH THE BALL OF STRONG SIDE FOOT.

terns can be broken down into circular and linear actions. They are broken down directionally into vertical, horizontal and diagonal patterns and can come from either high or low angles as well as inside and outside angles of attack. There are 12 basic attack patterns:

- 1. Downward Attack
- 2. Upward Slash/Thrust
- 3. Inside Downward Diagonal Slash
- 4. Inside Upward Diagonal Slash
- 5. Outside Downward Diagonal Slash



#### C ATTACK

- 6. Outside Upward Diagonal Slash
- 7. Inside Cross-body Slash
- 8. Outside Cross-body Slash
- 9. Inside "C" Slash
- 10. Outside "C" Slash
- 11. Straight Thrust and Power Assist techniques
- 12. Figure 8. Pattern Attacks

The letters (X.T.C.8) can be used to illustrate the majority of the directional attacks, excluding centerline attacks.

#### **BRING IT ALL TOGETHER**

As previously mentioned in this article, being able to actually implement the carry, draw and attacks with a combat folder ultimately come down to whether or not one has actually rehearsed or practiced with the weapon system. Simple exercises like the physical act of drawing the blade from the carry position

can and should be rehearsed at various speeds and intensities. Being able to draw while stumbling, being shoved or moving is the ultimate goal, although *all practice must be conducted safely.* The more frequently you practice, the safer and more quickly you can employ it. It is valuable to develop a drawstroke that immediately turns into an attack on a selected target.

The actual practice of wielding the knife is equally important. There are a variety of different training models out there for practice. There are actual aluminum folders with dull blades that can be used to practice draws and

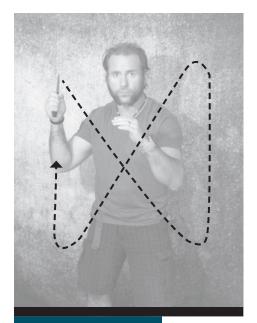


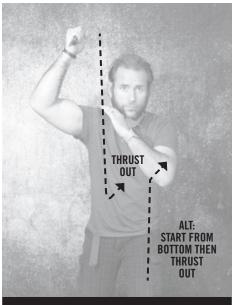
FIGURE 8 ATTACK

attacks. Aluminum folders are excellent for practicing attack from the draw. You may also practice attacks and counters with rubber or wooden training knives.

Lastly, one of the most overlooked aspects of deploying a combat folder is the proper mindset. The mindset is the aspect that ties everything else together. The mind dictates the actions of the body. Furthermore, in the event that you should find yourself employing an edged weapon, you are also facing the threat of serious bodily injury or death. The combat/survival mentality can basically be defined as being prepared to do what you may not normally do under regular circumstances in order to survive. When I train police, military or security personnel edged or counter edged weapon methods, I emphasize the mindset, particularly what I like to call the Edged Weapon Combat Imperatives. Although I did not personally invent any of the individual imperatives, I did put them together in such a manner as to help trainees prioritize their actions and to get into the combat survival mindset when facing and using an edged weapon. These "Imperatives" can be applied to any situation as they are general and interchangeable.

#### **EDGED WEAPON IMPERATIVES**

**Be prepared to get Cut:** This concept is about preparing to win, but being prepared for the worst and driving through it in order to survive-no matter the situation at hand. By preparing for the worst, one can com-



#### **CENTERLINE ATTACK**

partmentalize anything that comes their way and thus mitigate the likeliness of shock and trauma in the event that it happens.

Defang the Serpent: This is a very common expression in Filipino martial arts. It refers to the analogy that the arm wielding the weapon is like a serpent with fangs. It is important to take the fangs away from the serpent in order to mitigate the greatest threat and dominate the attacker. This requires realistic thinking–many self-defense instructors without combat experience and also entertainment forums promote unrealistic visions.

Time is of the Essence: Because of the deadly nature of the edged weapon and its effectiveness against vital targets, the ability to expeditiously disarm the attacker by defanging the serpent and controlling the subject is imperative. Considering that an effective wound to areas such as the Axillary or Brachial Arteries (where up to 10 percent of the body's blood flows through) can cause one to die of blood loss or shock within 30 seconds, time is truly of the essence.

**Control:** This is important because without this imperative, all is lost.

**Control Fear and Panic:** Fear can either propel you to survive or paralyze you leading to panic.

Control your Faculties (physical self): By controlling fear, you can maintain positive control of your bodily functions which leads you to controlling the attacking limb and eventually the attacker themselves

Control the Attacking Limb: You

must do this by defanging the serpent **Control the Subject:** Defang the serpent and this becomes a much easier task

**Control the Situation:** This is achieved by all of the above and constant awareness of dangers in addition to your primary adversary.

**Survival:** This is the most important to remember. Your techniques may not go as planned or rehearsed–in fact, they rarely do. However, you must do whatever it takes to survive the situation. Survival is the only option. Just remember techniques are like assholes. We all have one and they all stink. Some smell worse than others.

Attacking a distracted/unaware victim is generally a successful attack. Knives should be employed similarly to firearms in that multiple "shots" should be fired until the threat has been defeated. One shot (stab or slice) can't be assumed to be sufficient until the threat is confirmed to be defeated. Fixed blade knives are generally preferable to folders, but folders are often more practical to carry.

The edged weapon can be a great asset to anyone and can be carried nearly everywhere. The proper legal employment of an edged weapon may aid in any situation from common everyday tasks to self-protection and even survival. Before carrying an edged weapon, you should first check your regional or local laws and regulations pertaining to carrying a concealed weapon, self-defense and use of deadly force. You should also be aware of the types of blades and legal blade lengths allowed for carry in your area. You may be justified in the use of deadly force, but if the weapon of choice you are using is illegal you may turn a win situation to a lose situation. <

#### BIO

Andrew Curtiss is a professional Mixed Martial Arts Atblete. He has been training for over 30 years and has beld national Karate titles, been a world runner-up kick boxer and has advanced black belt rankings in several martial arts. He has authored three books. His book Combat Application Techniques: Principles of Destruction was based on a program be developed for his A Team at the 3rd Special Forces Group. He is a defensive tactics instructor for the U.S. Department of State. He is the writer of the Fort Worth Martial Arts and Fort Worth Libertarian Examiner and operates the website www.knife-and-b2bcombat.com.



BY: TONY SCOTTI / PHOTOS COURTESY OF TONY SCOTTI (www.vehicledynamics.com)

#### A great deal of research has been done and data collected on the minimum standards that define driver capability and skill.

hese studies are conducted by the Society of Automotive Engineers (SAE) and prestigious universities. The research defines driving skill as the driver's "ability" to use the vehicle's "capability." They express driving skill as the percentage of the vehicle a driver can use, prior to losing control of the vehicle. If a driver can use 50% of the vehicle, they define him/her as a 50% driver. If they can use 80% of the vehicle; they are an 80% driver.

Here is the bad news: studies have shown that the average driver can use only 40 to 55% of the vehicle's capability. This does not mean they lose control, it means they can no

longer put the vehicle where they want to put the vehicle. Yet when confronted with an emergency scenario (accident or ambush), the same studies have shown that the driver will be required to use a minimum of 80% of the vehicle's capability to avoid the problem. Also, after 40 plus years of conducting driver training programs, I would say when looking at the "average driver" the 40% to 55% number is accurate and may be optimistic.

The question that needs to be answered is: What percentage of using the vehicle to avoid an emergency can be labeled good, passable and minimum? Again, we rely on research done by the automotive engineering community. They express skill levels as:

If a driver can use 50% of the vehicle's emergency maneuvering capability, they are considered an inexperienced driver. (IMHO, they should consider walking as their mode of transportation.)

If a driver can use 60% of the vehicle, they are considered an average driver. (IMHO, they could go a long while with no problems, but in a security environment, when bad things happen, you can't afford to be average.)

If a driver can use 80% of the vehicle, they are considered a good driver. (IMHO - 80% is the minimum requirement for any and all security driving scenarios.)

#### TRANSLATING THE NUMBERS

Expressing skill levels in numbers is OK, but how do these numbers translate to reality? What is the driver experiencing at each of these levels of skill?

If the driver is using 60% of the vehicle's capability, they will start to feel changes in the vehicle's feedback. The vehicle body will start to lean. If the driver is using 70% of the vehicle's capability, their pucker factor will start to increase. The feel of the steering wheel is changing. The driver can feel the energy pushing on his body.

Using 80% of the vehicle's capability and above requires complete attention to the driving task. Using 80% of the vehicle's capability is difficult and requires skill that can only come from training. If you can accomplish this, you are above average. To stay in control the driver needs to anticipate the vehicle response to their input.

#### WHAT MAKES AN 80% DRIVER?

When confronted with an emergency scenario, the 80% driver anticipates changes in the vehicle behavior and is ready to maximize the vehicle's capability. A 40% driver simply reacts to whatever the vehicle does. The 80% driver has an understanding of the factors that dictate a vehicle's operational limit and those factors that dictate a driver's individual limitations. They have been trained to recog-

nize the indicators and warning signs that a vehicle is being operated at or near its limits and via that training have the skills to keep the vehicle within those limits and to do so within a very short time frame.

In the 90 to 100% area, this will be too fast for anyone but a trained driver with a great deal of experience. The driver will notice a big difference in how the car reacts to their inputs. The steering wheel and gas pedal become extremely sensitive. Small changes in steering or speed create big changes in the way the vehicle responds. At 100% the vehicle will more than likely be sliding sideways.What you were looking at through your windshield will now appear through one of the front door windows.

All data indicates that in an emergency scenario the transition from using 50% of the vehicle's capability to the 80 to 100% area is measured in tenths of a second, tenths of inches of steering wheel movement and/or 2 mph.

Can you measure how much of the vehicle you are using while driving? - Simple answer: Yes. At one time, measuring driving performance was a combination of difficult and expensive, but like everything else in the computer world, that paradigm has changed dramatically. The driver's skill level can be measured with a device called a G Meter. The G Meter makes measuring Vehicle/Driver performance easy and inexpensive. G Meters can be found as applications (Apps) in App stores on phones and tablets. In the App store search function, type in "G Meter." You will find many to choose from. They use the accelerometer in the phones/tablets to measure driver/vehicle capability. They range in price from free to about \$100. The one that I use is called Dynolicious (www.dynolicious.com).

#### **BRAKING SKILL**

The automotive studies also point out that most accidents start off with inadequate braking on the part of the driver. The brakes are the most powerful control of the vehicle. Pressing on the brakes produces larger changes in speed than pressing on the gas pedal. The brakes can easily overwhelm the most powerful engine. It takes more time to go from 0 to 60 mph than it does to stop from 60 to 0 mph.

Most drivers realize that the higher the car's speed, the more distance is required to stop. What is surprising to many drivers is how much additional distance it takes to stop a vehicle with just a small increase in speed. The fact is that if you double your speed you increase your stopping distance by a factor of four.

If you increase your speed from 40 to 44 mph, speed has increased by 10%, but stopping distance has increased by 20%. If you

> increase your speed from 40 to 25 %, but stopping distance has increased by 50%.

> The numbers listed above are not affected by the method of braking used. It makes no difference if a driver brakes with their left foot-threshold brakes-or uses a parachute to stop. If the speed is doubled, the stopping distance increases by a factor of four. Bottom line: you cannot arbitrarily increase your speed, it's literally deadly.

> A major component of braking to avoid an emergency has nothing to do with braking; it's all about where you look while the emergency is unfolding. Car manufacturers have been studying this phenomenon for a while. Simply stated, your hands go where your eyes look. As soon as the emergency presents itself look for a place

#### FOR EVERY 10% INCREASE IN SPEED IT IS A 20% INCREASE IN STOPPING DISTANCE. WHEN 50 mph, speed has increased by CONFRONTED WITH AN EMERGENCY, PRESS THE BRAKE PEDAL AS HARD AS POSSIBLE.



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# AT THE SPEED YOU ARE MOVING WITH THE GIVEN SIGHT DISTANCE HOW MUCH TIME DO YOU HAVE - AND IN THAT TIME FRAME WHAT CAN YOU DO WITH THE VEHICLE?

to put the vehicle. Look where you want the vehicle to go and your hands will follow your eyes. Many times the driver's eyes fixate on the object they are trying to avoid and the result is they drive into it.

#### **BRAKING SUMMARY:**

Be careful about increasing speeds. For every 10% increase in speed it is a 20% increase in stopping distance. When confronted with an emergency, press the brake pedal as hard as possible. The sooner and harder the brake is pressed the more steering the driver will have available for driving out of the emergency. Look where you want to put the vehicle.

#### GIVING YOURSELF TIME AND DISTANCE.

An accident or an ambush is a time/distance relationship. No matter what level of skill the driver possesses, if there is not enough time and distance to use the skill, bad things will happen. The driver needs to have the correct amount of *Sight Distance*.

Here's an explanation and example: We have all had the experience of driving on a major highway and running into stop and go traffic. The first thought you have is that there must be an accident just over the hill or around the bend. But when you get to the top of the hill or around the bend the traffic starts to flow and there is no accident. What caused the slowdown? Two things did: traffic volume and "line of sight."

Line of Sight or Sight Distance is defined

as the length of road surface a driver can see and have an acceptable reaction time. The people that are responsible for designing our highways have guidelines concerning "line of sight" and from those guidelines developed the all-important Decision Sight Distance (DSD).

DSD is the distance needed to recognize a problem and complete a maneuver safely and efficiently. According to the scientists who have done an enormous amount of research on driver reaction time, the "average" driver needs 2.5 seconds to complete the "recognize a problem" part of the DSD.

The question then becomes: How much distance do you use up before you get to the "maneuver safely and efficiently" part of the process? A good rule of thumb is that for every 10 mph a driver needs 40 feet of sight distance. If you are moving at a highway speed of 60 mph you would need 240 feet (40x6) of sight distance. At 75 mph you would need 300 Feet. Hence, if you are driving on a highway and for whatever reason-usually a hill or a series of bends in the road-and there is not 240 to 300 feet of sight distance, drivers will slow down. If the volume of traffic is sufficient it will cause an accordion effect. Please keep in mind that these distances are for the average driver.

Sight distance plays an important role in supplying safe and secure transportation. It is a major factor in determining if the event you drive into is winnable. No matter what the environment, driving to the mall with the family or driving in a high risk scenario, never drive faster than you can see—which means never drive at a speed that **will not** give you the time to react at the given sight distance

If you are driving in a security mode and are conducting a "route survey" the question you need to ask yourself is: At the speed I am moving with the given sight distance how much time do I have - and in that time frame what can I do with the vebicle? It makes no difference what training you received and where you received it or what type of vehicle you are driving. No matter what the scenario, accident or vehicle violence, if you don't have enough sight distance at the speed you are moving, it is a nowin scenario.

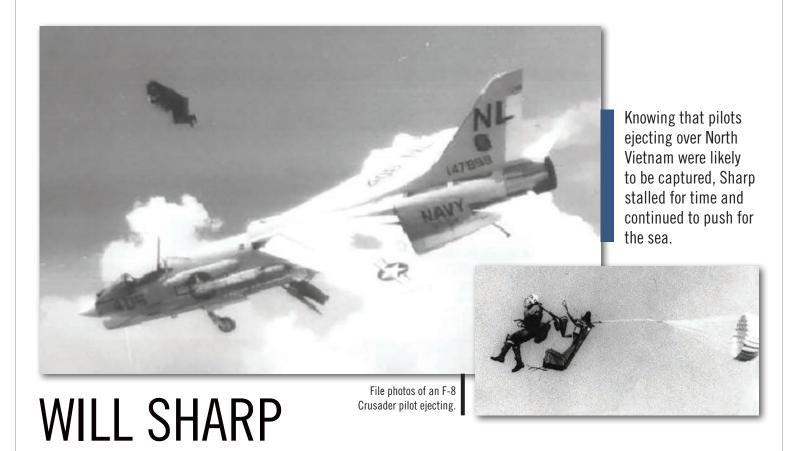
#### BIO

Tony Scotti created protective driving programs and has taught in over 30 countries. His client list includes the royal families of Kuwait and Jordan, the United States Secret Service, the United States Army Special Forces, the Canadian Department of External Affairs and numerous Fortune 500 companies. He has authored three books on security and driving including: Professional Driving Techniques. The author oversees the Vehicle Dynamics Institute Instructor Development Program (www.vehicledynamics.com).

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#### PROFILES OF COURAGE

Whether you're facing a fleet of AK-47 wielding communists, the challenges of providing for your family, or looking for the courage to speak an unpopular truth, there are times when each of us can use a little inspiration. Sometimes it helps to put your challenges in perspective. Sometimes it's encouraging to see how selfless human beings can be. Here is a noteworthy account of "Feedbag 108."



## On 18 November 1966, Navy Lt. Will Sharp was catapulted into the wind off the USS Bonhomme Richard in the Gulf of Tonkin.

harp was a veteran combat pilot and had returned successfully from a previous sortie with flak damage to his wing.

He dived his F-8 Crusader into an attack on a complex surface-to-air missile (SAM) site while his squadron mates attacked a bridge. The bridge was used to transport men and equipment to the North Vietnamese Army (NVA) and Viet Cong (VC) which were attempting to conquer South Vietnam. These SAM sites often had Russian or Chinese advisors and crew members in addition to NVA.

Sharp threaded his way through the missiles until ground fire ruptured his fuel line. He turned East toward the ocean and transmitted details of his situation. His flight leader shadowed him, and observing flames that would inevitably cause Sharp's remaining

fuel to eventually explode, he told the pilot to bail out. Knowing that pilots ejecting over North Vietnam were likely to be captured and tortured, Sharp stalled for time and continued to push for the sea.

Eventually, Sharp punched out and was relieved to get a functioning canopy and descend through a cloud layer to see that he was over the ocean. An A-4 Skyhawk circled him and A-1 Skyraiders converged to help defend him. As Sharp struggled free from his parachute and into a tiny one-man raft, a Vietnamese Junk pulled alongside him. There was a North Vietnamese bounty on American pilots and the boat's captain pointed his AK-47 at Sharp and motioned him aboard. On board the Junk, Sharp was stripped of his issued .38 revolver. When another pilot made

a low pass to see what was going on, the Junk operator turned momentarily to watch the air show. Sharp drew an unauthorized concealed personal backup gun and shot his way to freedom. He then jumped overboard to distance himself from the Junk, which he feared would deter a rescue attempt. As close-air-support from his friends rained down on a fleet of converging junks, a helicopter from the USS Gridley plucked him from the sea. Sharp concealed a shoulder injury and was flying combat missions again within a week. The US Navy lost 52 Crusaders to flak and SAMs in Vietnam.

Photos and audio of Sharp's close call can be reviewed at:

www.youtube.com/watch?v=o\_qRuj50urI

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