

Sharpen A Knife & Care For Your Collection



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Even with Nathan's Natural Honing Oil and a Lansky Natural Arkansas Benchstone, it remains an acquired skill that takes patience and time to hold the blade at an angle to the stone, and to maintain the bevel angle. The knife is a Spyderco Dragonfly Tattoo.

CHAPTER 1

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Hones Of Stone

Numerous knife enthusiasts place their trust in stones for blade sharpening

By Joe Kertzman

It's one of the oldest methods of honing a blade bevel, the most traditional, conjuring up images of ancestors, grandparents, even Japanese bladesmiths working edges on whetstones or oilstones, fingers blackened from the grit. Stone remains a popular sharpening medium. It might not be the Stone Age, but you would hardly know it by perusing the rock-hard offerings of knife or knife sharpener and accessory companies.

Unlike traditional stones bought for pennies apiece at the old hardware store, the Smith's 2-Stone Sharpening Kit (www.smithsedge.com) comes with a 5-inch, medium-grit stone, a 4-inch fine Arkansas stone, honing solution and a sharpening guide. The medium-grit stone, meant for quickly setting an edge, comes mounted on a molded-plastic base that features a built-in storage area at the bottom for holding the fine Arkansas stone, the latter of which is ideal for finishing or polishing an edge. The manufacturer's suggested retail price (MSRP): \$15.99.

"It is everything you need to put a razor-sharp edge on your large or small knives and tools," Richard Smith says. "The neat thing about this kit is that, although you get two stones, they only take up the space of one bench-mounted stone. I never lose the fine stone because it's always stored in the base, and it allows me to take the fine stone into the field with me if needed."

As long as a knife blade is flat ground, Smith says the 2-Stone Sharpening Kit will "hone any alloy, carbon or steel." "It will not sharpen serrations," he notes. "There is not a blade length limit for the kit. However, when sharpening long knives you have to be more conscious of the size of the stone and adjust your sharpening stroke accordingly.

"Always use honing solution or water as a lubricant when sharpening with stone sharpeners because it keeps the pores of the sharpener clear and clean," Smith adds. "It dissipates frictional heat and facilitates a smooth sharpening action.

"Natural Arkansas sharpening stones are known as 'the world's best finishers' when it comes to sharpening," he continues. "They actually polish the cutting edge as the stone removes small metal particles from the blade. When used properly, they can finish the cutting edge in a more clean, consistent manner than other sharpeners."

The late Arthur Lansky LeVine, long-time owner of Lansky Knife, Tool & Sharpeners (www.lansky.com), once gave his own lesson on Arkansas stones. "The correct terminology is novaculite," he said. "What makes a novaculite stone so unique is that, unlike aluminum oxide or silicon carbide, which either cuts or polishes, the crystalline structure of novaculite does both. That's what makes the stones so desirable."



The W.R. Case & Sons V-Sharpening Kit features two soft Arkansas stones on wooden shafts that fit into a wooden base so that, when in position, the stones are in a vertical "V" formation. The knife is an engraved Glenn Marshall K-II-2B Hunter.



GATCO's No. 80005 Natural Arkansas Sharpening Kit contains a wood-block-mounted, 5-inch natural Arkansas stone, a 3-inch fine stone, angle guide, honing oil and a plastic storage case.

A GOD-GIVEN GIFT

“No matter if it’s an Arkansas stone or a carborundum [silicon carbide] stone, the manner of using them is the same,” LeVine imparted. “It’s a God-given gift to hold the blade at an angle to the stone, and to maintain the bevel angle. That’s why the Lansky fixture sharpener was invented, but we also cater to people who are ‘old school,’ and who are used to using a benchstone.”

In addition to knives, Lansky Natural Arkansas Benchstones are ideal for honing chisels, planer blades, axes and large tools. They come in two sizes, 6x2 inches and 8x2 inches, and are recommended for use with Nathan’s Natural Honing Oil, also offered by Lansky. The stones come in slip-proof plastic bases. The MSRP: \$20 each.

“Common to all benchstones, when you hone, you create metal filings. Oil or water suspends the old filings,” LeVine explained. “Lightweight mineral oil or even cooking oil is sufficient for suspending the metal filings and particles, and making the stone easier to clean. People will take a rag, and if they dab the surface of the stone, it will lift the filings out, but if they run the rag across the face it will clog the pores.”

Much like the ceramic “V” or fixture sharpeners that Lansky helped popularize, the W.R. Case & Sons V-Sharpening Kit (www.wrcase.com) features two soft Arkansas stones on wooden shafts that fit into a wooden base so that, when in position, the stones are in a vertical “V” formation. In fact, Fred Feightner, consumer marketing and communications manager for Case, says, “It’s much the same way you might see ceramic sticks arranged.” The MSRP for the kit: \$34.99.

“After adding a few drops of oil to the stones, and spreading it across the surface so that the blade will glide along more easily, the user simply holds a knife, blade edge down, perpendicular to the base, as if one were going to cut a slice of cheese,” Feightner instructs. “You start sharpening at the top end of one stone, applying pressure while drawing one blade bevel against the stone face within one side of the ‘V’ in a downward motion toward you.”

After a few strokes on one blade bevel, the process is repeated on the second blade bevel inside the opposite arm of the “V,” and each step is continued until the desired cutting edge is attained.

“The solid-wood construction and flat base design give you added stability and additional safety while honing,” Feightner says. “The blocks are set at just the right angle for honing almost any Case knife to near-factory specifications. The soft Arkansas stones work great on all of our stainless or chromium-vanadium blades.”



The Smith's 2-Stone Sharpening Kit comes with a small, plastic angle guide that can be placed on the stone. The face of the blade is rested on the guide for the first few times a user hones a blade and until he or she becomes accustomed to holding an angle. The knife is a fileworked Pete Truncali folder.



Kanetsune offers natural whetstones with non-skid mounts, including the Model KC-653 coarse 500-grit stone shown here. Each measures 7.09 inches by 2.36 inches.



A.G. Russell says that when he owned a stone-cutting business and sold Arkansas sharpening stones, his customers favored a stone in a wooden box. Today A.G. Russell Knives offers three 6-inch Diamond Machining Technology interrupted-surface diamond stones in a cherry wood box.

ACCOMMODATING HONE

John Sullivan, director of marketing for Case, determines that the V-Sharpener can accommodate almost any-sized pocketknife, fixed-blade hunter or kitchen knife. “You’re only limited by your own technique and comfort level with varying blade lengths, as the sharpening action tends to get exaggerated with longer blade lengths,” he notes.

“Stones allow you to work at your own pace to get just the right cutting edge for you,” Sullivan continues. “Diamonds can remove a lot of material from your blades very quickly, and sticks are often better suited for maintaining an edge or finishing a honed edge after using stones.”

A.G. Russell Knives (www.agrussell.com) offers diamond sharpening stones, specifically three 6-inch Diamond Machining Technology (www.dmtsharp.com) interrupted-surface diamond stones in a cherry wood box. The extra-fine, fine and coarse stones incorporate micron-size monocrystalline diamonds in a dot-pattern matrix, and the bottom of the cherry box is routed to hold a stone in place while sharpening. Russell’s price for the set: \$114.95.

“When I owned a stone-cutting business and sold the finest Arkansas sharpening stones to be found, my customers favored a stone in a wooden box,” Blade Magazine Cutlery Hall-Of-Famer© A.G. Russell says. “Fitting three diamond stones in a wooden box means all three are together when needed. DMT’s sharpening stones are the finest diamond sharpeners I have ever used. They will hone the hardest material in less time and with less effort than conventional sharpening stones of novaculite or ceramic.”

Goldie Russell adds, “The diamond surfaces that DMT uses on their devices work much better to sharpen knife edges that are extremely dull. The diamonds are more aggressive and will remove more metal quickly, which is what is needed when the edge is really dull or has small nicks.”

On the simple and convenient end of the “hones-of-stone” spectrum, Buck Knives (www.buckknives.com) offers an Arkansas Washita Honing Stone. Measuring 1 5/8 inches by 4 3/8 inches, the 600-grit natural sharpening stone comes in a black nylon sheath. The MSRP: \$13.

A Japanese company, Kanetsune (www.kanetsune.com) offers natural whetstones with non-skid mounts, including the Model KC-653 coarse 500-grit stone, and the 1,000-grit KC-654 model. Each measures 7.09 inches by 2.36 inches and weighs 1.76 pounds. Their respective MSRPs: \$29.99 and \$38.99.

“We believe that sharpening a knife with a benchstone is an effective method for putting a sharp edge on a blade, especially for kitchen knives that require a very sharp, fine edge in order to cut foodstuffs,” says Young Lee, president of Torumo International, L.L.C., which offers Kanetsune knives and sharpeners.

Also of Japanese origin are the Masahiro sharpening stones offered by Boker USA (www.bokerusa.com). In the lineup are the Shiageto fine, 1,500-grit stone for honing high-performance blades, the Nakato medium, 1,000-grit model for razor-sharp blades, and the Arato rough, 600-grit stone for reshaping dull blades or for eliminating small nicks. Each measures 7x2 inches, and the MSRPs with non-slip, solid plastic bases: \$34.95, \$29.95 and \$24.95, respectively.



The Japanese Masahiro sharpening stones offered by Boker USA include the Shiageto fine, 1,500-grit stone, the Nakato medium (shown sharpening a Victorinox Swiss army knife) 1,000-grit model, and the Arato rough, 600-grit stone.

STONE HONE TRADITION

According to Boker, the stones should be handled according to the traditional method of Japanese sharpening, and never without water. “They offer a very consistent quality, providing professional results,” says Boker’s Dan Weidner. “This takes practice, but with experience, it becomes second nature. One good way to get a consistent angle is to mark the cutting edge with a black magic marker. After a few strokes on the stone, you can see where the edge is clear again, opposed to where the mark remains. This will tell you to adjust a bit one way or another.”

Like the 2-Stone Sharpening Kit from Smith’s, the GATCO No. 80005 Natural Arkansas Sharpening Kit (www.gatcosharpeners.com) comes with a small, plastic angle guide that can be placed on the stone. The face of the blade is rested on the guide for the first few times you hone the edge, and until you become accustomed to holding an angle.

The kit contains a wood-block-mounted, 5-inch natural Arkansas stone, a 3-inch fine Arkansas stone, angle guide, honing oil and a plastic storage case. The MSRP: \$39.99.

Though it takes practice to become accustomed to using such stones, Weidner focuses on the benefits.

“The stones offer a very traditional way of sharpening that has been handled this way in Japan for years,” Weidner explains. “Many traditionalists feel that this is the only way to sharpen mankind’s oldest tool. Others feel a very calming and therapeutic effect performing this chore.”

Did You Know?

According to Fred Feightner and John Sullivan of W.R. Case & Sons Cutlery (www.wrcase.com), the soft Arkansas stones used in the company's V-Sharpening Kit are estimated to be more than 340 million years old. They are mined from the Ouachita Mountains, which stretch from east of Hot Springs, Arkansas westward into eastern Oklahoma.

There are a number of quarries, says Arthur Levine of Lansky Knife, Tool & Sharpeners (www.lansky.com), some worked by the Smith family of Smith Abrasives (www.smithsedge.com), and others controlled by Norton Abrasives (www.nortonabrasives.com). Norton supplies Lansky with Arkansas stones.

"Smith's has been in the Arkansas stone business for 124 years, but did not start selling finished stone sharpeners until the early 1960's," Richard Smith notes.

No Rust for the Wary

By James Morgan Ayres



According to Duane Dwyer of Strider Knives, Nitinol is a non-ferrous metal with no carbon in its mixture, is not subject to rust and is an exceptional performer. This is Strider's SMF folder in a Nitinol blade. Dwyer (right) and Scott Devanna hold two Strider Nitinol knives at the material's unveiling during the 2008 BLADE Show. (knife photo courtesy of True North Knives)

People in general and most knife aficionados in particular loathe rust—insidious, creeping, sneaking rust. Rust insinuates itself onto and into your knives and eats away at them. It has been the bane of countless bladesmen for a very long time. Knife enthusiasts fight rust with oil and care, close attention and diligent maintenance.

Rust is an oxide resulting from carbon—an essential ingredient of steel—coming in contact with oxygen. This oxidation continues wherever there is oxygen, which is most of the places where knives are used.

A number of varieties of stainless steel and other materials have been developed to combat the ravages of oxidation. In the old days, many compromises had to be made to produce stainless steel, including sacrificing some keenness of edge for toughness and vice versa. Today there is a legion of wizards using modern technology to combat rust without the need for so many compromises.

Frank Rich was with Crucible Steel, the developer of CPM-S30V and other stainless and carbon steels, for 20 years. Now he is with Niagara Specialty Metals (<http://www.nsm-ny.com/>), a company that provides S30V. He was involved in S30V's development, along with a group of metallurgists who went through many stages of lab work before releasing test batches to makers.

Traditional factory steel is made by pouring the melt into an ingot and forging and rolling it into a slab. In the CPM (Crucible Particle Metallurgy) process, each element of the alloy is formed into tiny particles that are sprayed into form and cooled by argon gas. This process ensures that each particle will have the proper amount of each element—mainly carbon, chromium, molybdenum and vanadium—in the alloy. Rich noted that it is critical to get the precise alloy mixture. For example, too much chromium, which resists rust, will make it difficult for the steel to get a good edge. According to Rich, the process requires no sacrifice in edge holding or toughness to achieve rust resistance. He indicated S30V is not only Niagara's most rust-resistant steel, it is also the best performing.



H1 steel comprises the 3-inch blade of the Spyderco Salt I. Closed length: 4 inches. According to the 2011 Spyderco Product Guide, H1 is "entirely rustproof—100 percent. Period." (Spyderco photo)

NITROGEN & LOW OR NO CARBON

John Steedman is a representative of Bohler-Uddeholm (<http://www.bucorp.com/>), which produces a wide range of steels. He talked about a relatively new alloy: Vanax. Originally developed by Uddeholm for industrial applications in extremely harsh saltwater environments, Vanax is now being used for knives. It is a low-carbon/high-nitrogen powder alloy and comes in two types: Vanax 35 and Vanax 75. Nitrogen forms hard nitrides with vanadium to offer the high wear and corrosion resistance of the 300 stainless series steels used in marine applications. According to Steedman, Vanax is 2.5 times as tough as 440C stainless but provides performance comparable with other powder steels.

Isidora Forrest of Kershaw (<http://www.kershawknives.com/>) said Zero Tolerance offers the Model 0550 in a blade of Vanax 35, which debuted in early 2011. Kershaw's Tilt, the Blade Magazine 2010 American-Made Knife Of The Year®, features a blade of Vanax 75.

Rich and Steedman both stated that no matter how good the steel, its heat treatment, blade/edge geometry and overall craftsmanship in general are crucial in producing a quality knife. Finishing is also important since a smooth finish pro-

vides fewer places for rust to form. Which brings us to Spyderco (<http://www.spyderco.com/>) and Strider Knives (<http://www.striderknives.com/site/>), two companies known for high craftsmanship.

According to Spyderco's Joyce Laituri, the Japanese alloy H-1 is nitrogen based and is the company's most rust-resistant blade material. It contains a scant .15 percent carbon. Unlike carbon-based steels, H-1 is not smelted but cold rolled under extreme pressure, and not heat treated but hardened through the pressure. In addition, H-1 work hardens differentially, making it harder at the cutting edge when it is sharpened or machined and exposed to heat and friction, and softer at the spine, the latter for blade toughness. H-1 is used on Spyderco's "Salt" series of knives and Laituri said its performance is on a par with many high-carbon steels. Essentially, she added, there is no compromise in H-1's performance to achieve rust resistance.

Duane Dwyer of Strider Knives said Strider uses Nitinol, a nitride alloy with molybdenum and chromium, for its folders and in applications that require the ultimate in rust resistance. According to Dwyer, Nitinol is a non-ferrous metal with no carbon in its mixture, is not subject to rust and is an exceptional performer. (Nitinol is short for Nickel Titanium Ordnance Laboratory. Its full name is 60 Nitinol. It is 60 percent nickel and the rest is titanium.)

However, he qualified, for extreme field use no stainless alloy equals the all-around performance of the highest-grade tool steels such as A2 or D2. He said the top stainless alloys can be made to equal or surpass one or two abilities, such as cutting, toughness, edge holding, rust resistance, etc., of the highest-grade tool steels, but not all the abilities—at least not yet. He stated he thinks stainless alloys will be introduced very soon that will exceed tool steels in all criteria.

That said, Dwyer indicated the best all-around material for a field knife is S30V because it offers the best combination of function and features for the Marine or soldier in the field (many of Strider's customers are active-duty military). "Today's troops simply will not or do not maintain their knives as we did in years gone by," he observed. "Many don't know how to sharpen a knife. Few have the time or energy to maintain a carbon steel blade."

Like Strider, Spyderco provides knives to active-duty service personnel and receives immediate feedback from troops in the field. Observed Laituri, "There are situations where maintenance isn't possible, and the certainty of edge retention and no worries about rust is key for those in the field."

Incidentally, all those interviewed agreed both too much and not enough emphasis is placed on rust resistance, thereby validating F. Scott Fitzgerald's dictum: "The test of a first-class mind is the ability to hold two opposing views at the same time and still retain the ability to function."



Debuting in early 2011, the Zero Tolerance 0550, a collaboration with knifemaker Rick Hinderer, features a blade of Vanax 35. (Kershaw photo)

HAIL THE KNIFE WIZARDS!

Given that I am approaching geezer status and remember—or at least think I do—keeping a carbon-steel Randall knife rust free during extended periods in wet, tropical environments, my first reaction on the topic of stainless steels was, "What's the fuss? Keep it sharp and oiled."

However, I too am in close contact with a number of active-duty military people and civilian operators, some of them family members, and have come to realize that everything changes with time. Those who go in harm's way today are subject to multiple deployments and, in some cases, have served more time in combat zones than the length of the entire U.S. involvement in World War II. I silenced my inner curmudgeon with the reflection that the emphasis on rust resistance, along with edge retention, is not excessive but appropriate for an ever-changing world.

I'm just glad our troops have access to the highest technology today's knife wizards have to offer.

*BLADE MATERIALS IN THE STORY**

| Material | C | Cr | Mn | Mb | Ni | N | Ph | Si | S | V |
|-----------|------|-------|-----|--------|-----|-----|-----|-------|-----|-----|
| A2 | 1 | 5.25 | .85 | 1.1 | - | - | - | .35 | - | .25 |
| D2 | 1.55 | 11.5 | .35 | .9 | - | - | - | .45 | - | .8 |
| S30V | 1.45 | 14 | - | 2 | - | - | - | - | - | 4 |
| H-1 | .15 | 14-16 | 2 | .5-1.5 | 6-8 | .1 | .04 | 3-4.5 | .03 | - |
| Nitinol** | | | | | | | | | | |
| Vanax 35 | .2 | 20 | .3 | 2.5 | - | 1.9 | - | .3 | - | 2.8 |
| Vanax 75 | .2 | 21.20 | .3 | 1.3 | - | 4.2 | - | .3 | - | 9 |

**All numbers are percentages. **Nitinol reportedly is 60 percent nickel and 40 percent titanium. Key: C=carbon; Cr=chromium; Mn=manganese; Mb=molybdenum; Ni=nickel; N=Nitrogen; Ph=phosphorous; Si=silicon; S=sulfur; and V=vanadium.*



The Blade Magazine 2010 American-Made Knife Of The Year®, the Kershaw Tilt comes with a 4-inch blade that is a composite of a Vanax 75 cutting edge and a 400 series stainless spine. The manufacturer's suggested retail price: \$350. (Point Seven photo)

Freehand Sharpening

Learn to do it well and fast on a bench stone via the author's "marker technique"

By Dexter Ewing

Freehand sharpening is a skill that must be developed with practice, along with trial and error—at first, mostly error. Please bear in mind that what I am about to describe is not necessarily the right or wrong way to do it, but my way.

The key to mastering freehand sharpening is keeping the angle of the blade to the stone consistent. If you do not, your knife will not be sharp. The edge bevel will be round instead of flat.

You must be patient to master freehand sharpening. Accept the fact that you will make mistakes. It will take a while to get the feel of it, so do not think you can invest a few hours or a few days and have the technique mastered.

THE SHARPENER

Invest in a good bench stone. You have the natural ones like the Arkansas stones and the manmade ones such as the Norton India stone. There are also the diamond-bonded stones like any of the many that Diamond Machining Technology (www.dmtsharp.com) and others produce.

Select the stone based on your knife's blade steel. Diamond stones work well with the high-performance steels such as CPM-S30V, BG-42, 154CM and others. While they sharpen blades of high-performance steel—though not as quickly as the diamond abrasives—Norton India, ceramic and Arkansas stones excel at sharpening low-to-mid-grade stainless, as well as all grades of carbon and tool steels. Also, diamond stones use water as lubrication, the rest use oil.

HOW TO DO IT

With a black ink Sharpie® permanent marker, color the entire cutting edge or primary bevel on both sides of the blade. The objective is to sharpen off the black ink. After you remove the ink from both sides of the blade, it will be sharp!

Take a few strokes on the stone and then examine the edge bevel. If you see ink toward the top of the bevel, decrease the angle of the blade to the stone. Conversely, if you see ink toward the bottom of the bevel, increase the angle to capture that part. In other words, you must monitor any ink left on the cutting edge and remove it throughout the sharpening process.

After you have successfully sharpened away the marker ink from the first side of the blade, turn the knife over and repeat the same process for the second side. After you have removed the ink from the second side, flip the blade over to the first side and carefully feel for a small, raised burr across the cutting edge. The last step is to lightly "wipe" the burr off by gently running the side of the blade with the burr across the bench stone. When you complete this step, you have successfully sharpened a knife!

SHARP TIPS

After you sharpen the ink from the cutting edge, you will have to remove any stray marker ink. Goof Off® (www.gooffoffstainremover.com/how-remove-paint), a liquid-based adhesive and paint remover available at your local hardware store or home center, is ideal for the job. Place a few drops on a paper towel and very carefully wipe the cutting edge.

Another tip is to procure a couple of \$2 knives from the hardware store or flea market. Practice on them and make your mistakes prior to moving on to your good knives. This is a great way to practice and gain confidence in short order.

CORRECTLY AND QUICKLY

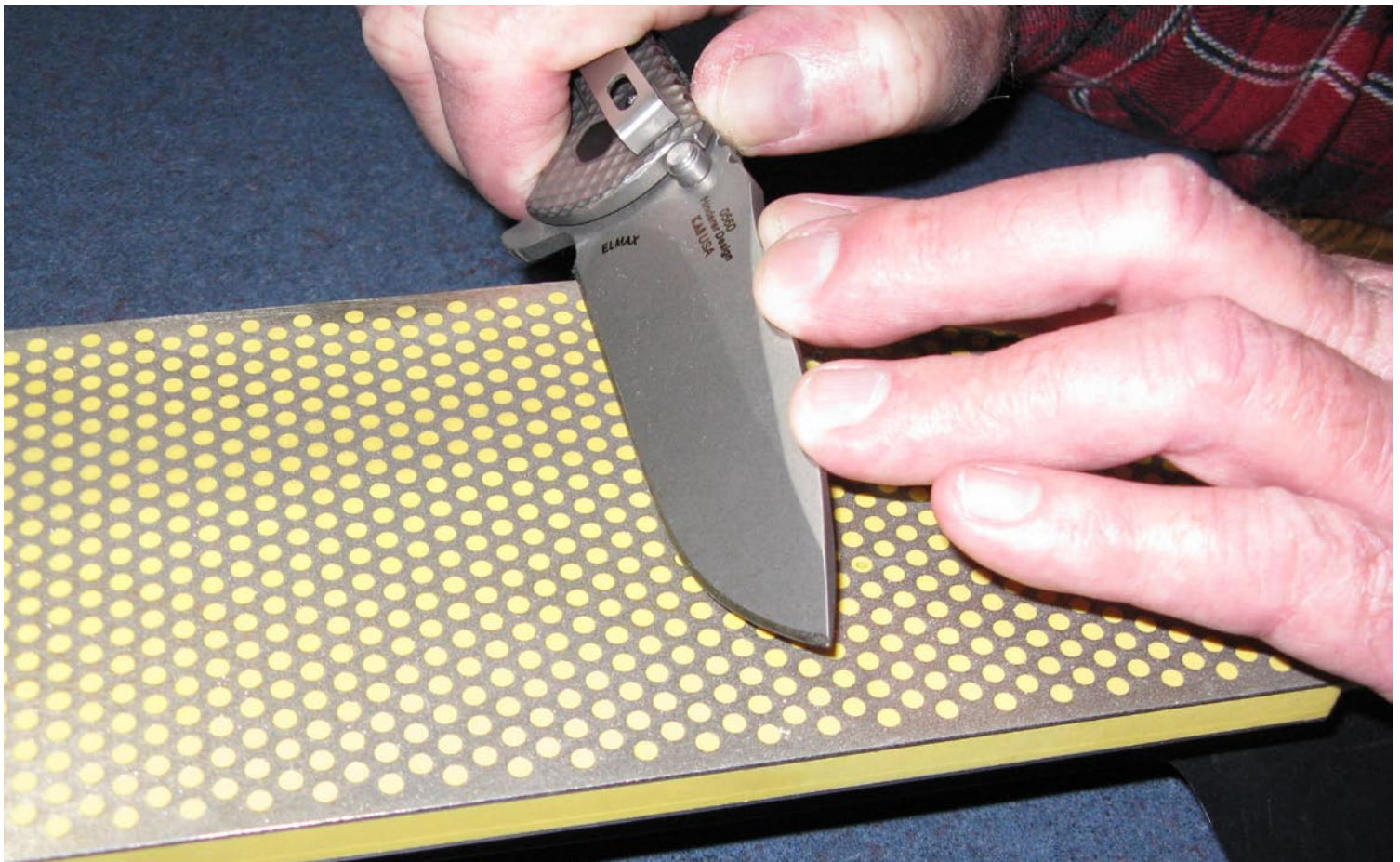
This technique works with fixed blades and folders, short and long blades, and kitchen, hunting, gent's and tactical knives. After you get the hang of it, skip the permanent marker step. The marker technique is simply a way to sharpen a blade correctly in the shortest amount of time.



With a black ink Sharpie® permanent marker, color the entire cutting edge or primary bevel on both sides of the blade. The knife is the Zero Tolerance (www.kershawknives.com/products.php?brand=zt) Model 0560 flipper folder, a Rick Hinderer (www.rickhindererknives.com) design. (Ewing photos)



Make a few strokes on the stone (top), doing your best to maintain a consistent angle of blade to hone throughout, and then examine the ink on the edge bevel (bottom). The stone is the DMT DuoSharp, with base. (Ewing photos)



If you see ink toward the top of the bevel when you examine the edge, decrease the angle of the blade to the stone (top). Conversely, if you see ink toward the bottom of the bevel, you need to increase your angle (bottom) to capture that part. In other words, you must monitor any ink left on the cutting edge and remove it throughout the sharpening process. (Ewing photos)



After you have successfully sharpened away the marker ink from the first side of the blade, turn the knife over and repeat the same process for the second side, being sure to check the ink periodically and adjusting the blade-to-hone angle where necessary. (Ewing photos)



After you have removed the ink from the second side, flip the blade over to the first side and carefully feel for a small, raised burr across the cutting edge (top). The last step is to lightly “wipe” the burr off by gently running the side of the blade with the burr across the bench stone (bottom). When you complete this step, you have successfully sharpened a knife! (Ewing photos)

The Pros' Favorite Sharpeners

The choices vary depending on whether the use is in the field or at home

By Durwood Hollis

Professional outdoor writers—especially those who hunt—spend plenty of time in the woods, and these dedicated sportsmen use their knives frequently in a variety of activities. Since nothing's tougher on a knife than field dressing, skinning and trophy work, sharpening has become a priority with these fellows.

To better understand the what-to-use and how-to-do-it of knife sharpening, I asked four writers about the sharpeners they use in the field and at home. Since these gents are far more apt to use their knives on a regular basis than most of us, their advice carries considerable weight.



Carried in a belt case or slipped into a shirt pocket, the Buck Arkansas Washita Honing Stone (<http://www.buckknives.com>) is one of writer Dave Campbell's favorites for edge touchups. Its compact size makes it a great choice for field use. (photo by Durwood Hollis)

DAVE CAMPBELL

At press time, Dave Campbell was operating as a freelance writer. An outdoor scribe for many years, his resume includes writing a column for *Western Outdoor News*, serving as an associate editor for *Petersen's Hunting Magazine* and as an editor for NRA Publications (<http://www.nrapublications.org/>). For field use, he carries a small pocket stone and a bottle of honing oil. "One of my favorite sharpeners is an Arkansas Washita Honing Stone [Model 97062] from Buck

Knives (<http://www.buckknives.com>)," he said. "When my knife edge starts to go south, a little work on the stone usually fixes the problem."

At home, he uses a full-size whetstone to sharpen his knives. His current home sharpener of choice is a Hall's ProEdge whetstone (<http://www.hallsproedge.com/>). It measures 10x3x1 inches and comes in a wooden case with four rubber feet for stability.

"When using the stone, I begin sharpening by moving the blade edge along the surface in small circles to properly set the angle. Then I finish with slow and even back-and-forth strokes, alternately changing blade sides," he advised. "I also have an EdgeCraft Chef's Choice Model 120 (<http://www.edgecraft.com/>) electric sharpener. It does a fine job on really dull blades and also works great for quick touch-ups."



At home, writer Dave Campbell uses the EdgeCraft Chef's Choice Model 120 (<http://www.edgecraft.com/>) electric sharpener. (photo by Durwood Hollis)



The Spyderco DoubleStuff (<http://www.spyderco.com/>) is one of writer Rick Hacker's preferred sharpeners. Featuring fine and medium abrasive sides, it comes with a soft leather case for pocket carry. (photo by Durwood Hollis)

RICK HACKER

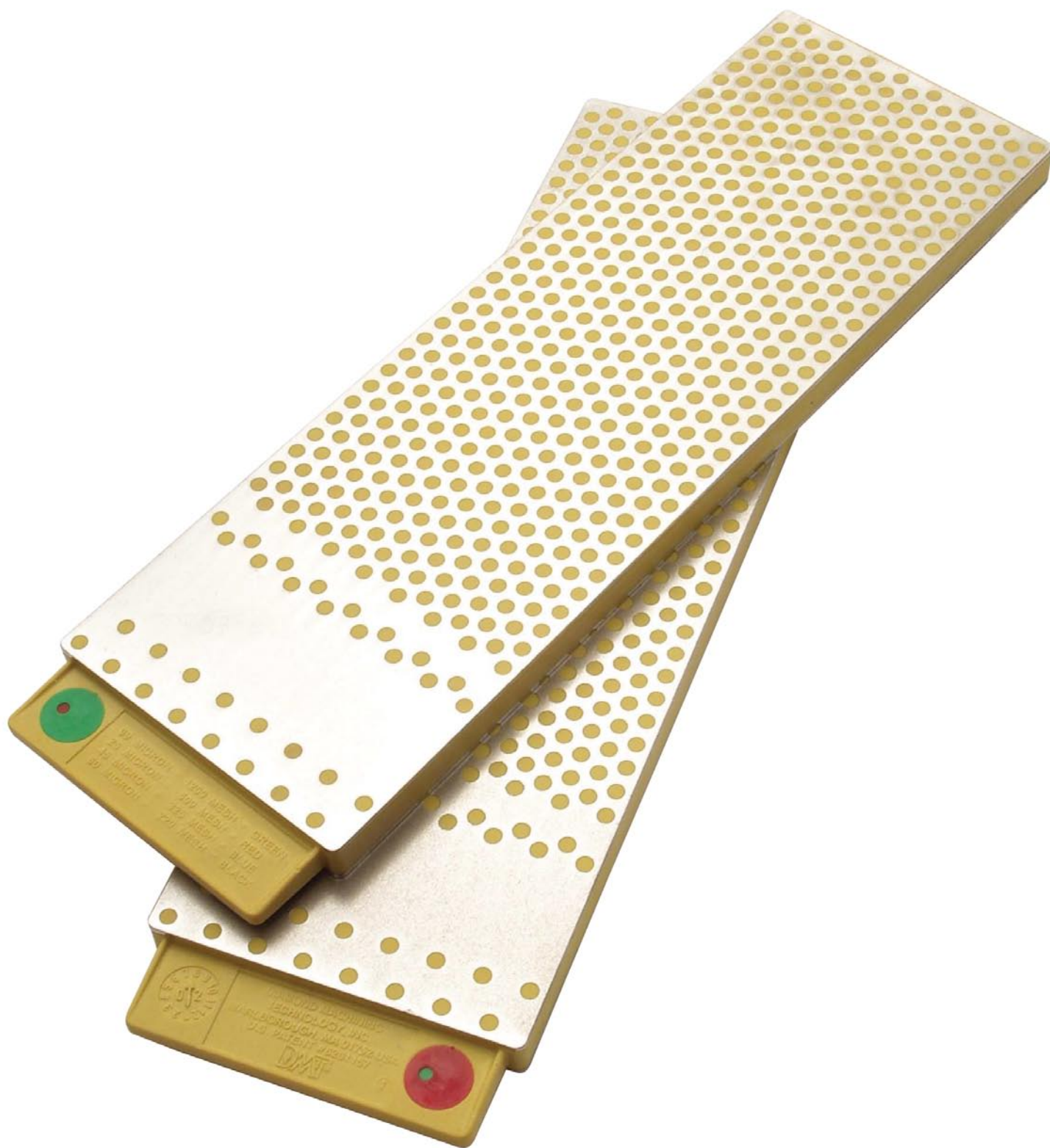
A long-time gun writer, Rick Hacker works for both *Guns & Ammo* magazine and NRA Publications. One of the most knowledgeable professional writers in the business, Rick's outdoor experience is extensive.

"In the field, I always carry a small pocket whetstone," he began. "It can be used dry but, if the edge is really dull, a little moisture serves as a lubricant. Over the years I've used several different small stones, but one of my favorites is the Spyderco Model 303MF 'DoubleStuff' (<http://www.spyderco.com/>). The fact that two different abrasives—fine and medium—are bonded together in a single pocket-size stone makes the sharpener a great mobile field tool."

He said he prefers to sharpen his knives at home where time constraints do not interfere. "The tool I use in camp or at home is a Spyderco Tri-Angle Sharpmaker," he noted. "The best thing about it is that I never have to worry about maintaining the right blade-edge-to-abrasive presentation. The angle is built right into the tool itself. And the various components fit into the base, with a cover closure that keeps everything in place."

Hacker indicated his method for knife sharpening is simple.

“I set an appropriate angle and move the blade edge across the abrasive medium in slow, even strokes, alternating sides on every pass of the blade. Basically, I sharpen by feel,” he said. “Both the abrasive and the edge will quickly let you know when you’re on the right track.”



The DMT DuoSharp is one of writer Jim Matthews’ sharpeners of choice. The coarse side—designated by the red dot—of the DMT DuoSharp’s (<http://www.dmtsharp.com/>) diamond-coated, perforated sharpening platform works great on extremely dull blades. The fine side (green dot) is just the ticket for edge touch-ups. (photo by Durwood Hollis)

JIM MATTHEWS

Jim Matthews writes a weekly outdoor column for a number of newspapers. He also has been published in a wide range of outdoor journals, including *Shooting Sports Retailer*, *Outdoor Life*, *Petersen’s Hunting Magazine*, *Successful Hunter* and many others.

“Blade-edge care is almost second nature to me,” he observed. “Not only is a sharp knife paramount to successful game care, but a keen edge is also indispensable in the kitchen. In the field the handy Jiffy Sharp, by Smith’s Abrasives (<http://smithsedge.com/>), is my first choice for knife sharpening. The sharpener is lightweight, easy to use and can put an edge on the dullest knife in a matter of seconds.”

When at home, Matthews uses the DuoSharp Diamond Sharpener from Diamond Machining Technology (<http://www.dmtsharp.com/>).

“The diamond abrasive bonded to the perforated nickel plate really gets the job done,” he said. “And I haven’t found lubricant is necessary. And that means there’s no mess to clean up afterward.

“My approach to sharpening with the DMT DuoSharp is simple. I establish an appropriate edge-to-abrasive angle and then carefully stroke the sharpening medium, switching sides of the blade on every pass. It only takes a few minutes to restore blade-edge integrity with this tool. And the abrasive plate can be removed for easy cleaning.”



Writer Jim Matthews said the Jiffy Sharp from Smith’s (<http://smithsedge.com/>), is his first choice for knife sharpening. The Jiffy Sharp features a pair of pre-angled carbide tips through which you drag the knife blade to create a new edge within seconds. (photo by Durwood Hollis)

SAMMY REESE

A columnist for *American Handgunner*, executive editor for *American Cop* magazine, and editor of FMG Publications’ special edition books, Sammy Reese wears many writing hats. In addition, he is a dedicated big game hunter.

“With my law enforcement background, over the years I’ve had to deal with some badly abused blades,” he commented. “And nothing works better than the tiny Gerber Ceramic Pocket Sharpener (<http://www.gerbergear.com/>). It’s small enough to fit into a shirt pocket and weighs only a few ounces, yet its two-stage [coarse and fine] ceramic abrasive rods can put an edge back on even a totally dull blade in a matter of minutes.”

Reese said he always carries a Spyderco Tri-Angle Sharpmaker in his truck for camp use. “Depending on the degree of edge erosion, I use either the diamond or ceramic sharpening rods in the tool,” he pointed out. “My technique is to work slowly and attempt to ‘thin slice’ the sharpening medium.”



Made from novaculite, a form of chert or flint, the Pro-Edge bench stone from Hall's Arkansas Oilstones (<http://www.hallsproedge.com/>) polishes a blade edge as it sharpens. Mined near Hot Springs, Arkansas, then cut and lapped on all sides by hand, novaculite has flat surfaces that make it an ideal sharpening medium. (photo by Durwood Hollis)

FINAL CUT

All four writers seem to have arrived at similar knife sharpening destinations. In the field, each wants a tool that is lightweight, compact and easy to use. At base camp or home, where time is not an issue, the preferred sharpening tools are full size. In some instances, assembly is required.

The ready availability of a wide range of knife sharpeners has made edge maintenance easier than ever. Selected wisely and used regularly, any of the tools mentioned herein have proven themselves capable of keeping your favorite steel sidekick sharp for both safety and success.

Lubed, Oiled, Greased and Bladed

Whether to maintain knives, boost operation or both, lubricants serve and protect

By Joe Kertzman



A nonflammable drying agent, Clenzoil Foaming Aerosol (<http://www.clenzoil.com/>) helps eliminate contaminants from blades, parts and “hard-to-reach places” like folder pivots. After the aerosol has been sprayed onto the knife part, Thomas Buck, president of Clenzoil, recommends wiping it off with a non-abrasive rag or lamb’s wool applicator. The knife is the Spyderco Spyderfly.

Steel, moving parts, sharpened blade bevels, a mix-match of materials for handles, bolsters, guards, liners, back bars and spacers—all these things add up to areas on a knife that could corrode, collect grime, gum up or cease working properly. Much like cars, the moving and stationary parts of knives must be regularly maintained. As Tom Madden of Tai Lubricants says, “Knives go through tough use and environmental conditions. It is important to protect your investment with a quality lubricant.”

Tai Lubricants’ (<http://lubekits.com>) Nye Rheolube 362HB Grease is a white, synthetic product with additives that Madden explains contain “corrosion inhibitors, oxidation stabilizers, Teflon™ and a special thickener to keep the grease in one place without moving.” It comes packaged in a 1.76-ounce squeeze tube and carries a manufacturer’s suggested retail price (MSRP) of \$19.95.

“I’ve been selling this grease to gun and knife owners for years with great feedback,” he notes. “Applying a small dot of [it] to a folder pivot assures long-lasting life of the knife and ease of operation. A synthetic formula, you will not have to worry about the grease drying up or gumming up.

“Remember one thing,” Madden advises. “When lubricating anything, less is better. Folks believe putting more oil or grease on an object will make it perform that much better. The opposite is true. Just a small amount will enhance performance.”

Latama (<http://latama.net>) not only offers a product—Quick Release Oil—that lubricates and protects folder pivots and other moving parts, but also a .01-inch-diameter orifice tip for applying the oil to hard-to-reach places. The company’s website boasts that the Refillable Precision Oiler delivers Quick Release with “surgical accuracy, using less and getting more.”

“Tools that used to be handed down for generations rarely survive one,” determines Walter Halucha of Latama. “The pores in the parts provide areas where dirt and moisture accumulate. Porosity in metal is the result of the way the parts were made. Basically, the better the finish, the smaller the pore.

“Quick Release’s special formula is designed to fill those pores, driving out dirt and moisture, and providing a slick, protective film to prevent their return,” Halucha continues. The MSRP for a 1-ounce bottle and one Refillable Precision Oiler: \$10.50.



Ever since Mark Mrozek (right) of Sentry Solutions (<http://www.sentrysolutions.com>) gave custom knifemaker Wally Hayes (left) a sample of the Marine Tuf-Cloth at the BLADE Show a decade ago, Hayes has been using the product to put a protective coating on his damascus and high-carbon-steel blades.



The wax, polish and cleaner included in the Flitz Gun/Knife Care Kit (<http://www.flitz.com/>) are water-based products that don't leave oily residue, saving cleaning and polishing time, according to Flitz's Scott Graham.

SLICK LUBRICITY

Knifemaker Paul Panak (<http://www.burnknives1.com/biopage.html>) agrees. "The lubricity of Quick Release is rivaled by no other oil I've used," he praises. "It doesn't load up and become gunky over time. It stays slick. I use it on all my pivots and sear engagements on my automatics. On my out-the-front autos, I apply it into the track area inside the handle, where the blade slides and wherever there is surface-bearing contact.

"The stuff works even better on a pivot that has bronze phosphorous washers," he adds. "With a drop of the oil on each side of a washer, it makes for fast action. It's awesome, whatever it is. Maybe they're pulling the oil off a duck's feathers or something."

Michael Prater of Painted Pony Designs (<http://www.pratercustoms.com/v1/>), who specializes in customizing factory knives, also recommends Quick Release. "Several years ago, Walter gave me a couple bottles of lubricant to try. Because we work with so many folding knives, we need a lubricant that is slick to aid in making the blades close with a snap," he notes. "Since then, we've put it on about 70,000 knives."

Knifemakers who have a stake in how their knives perform provide solid endorsements of maintenance products. "I came across Sentry Solutions (<http://www.sentrysolutions.com>) 10 years ago at the BLADE Show in Atlanta," begins knifemaker Wally Hayes (<http://www.hayesknives.com/>). "They were handing out samples of the Tuf-Cloth at the booth.

"I make knives with damascus and high-carbon-steel blades, so having a protective coating on a blade is a must," he continues. "My favorite Sentry Solutions product is the Marine Tuf-Cloth. It's easy to apply. Take the cloth out of the

reusable bag, wipe the blade and put the cloth back in the bag. The Tuf-Cloth is non-toxic and has a pleasant smell. I've been giving away samples and cutting off pieces of my cloth to give to people coming to my shop for years."

According to Mark Mrozek of Sentry Solutions, the Marine Tuf-Cloth is a lint-free alternative to oil and silicon rags. It works using dry-film corrosion inhibitors and lubricants, providing a fast-drying, water-displacing, micro-bonding crystal barrier against rust, friction and wear.

"It can be used in or on saltwater, and excels in extreme conditions or during long-term knife storage," Mrozek explains. "In times like these, critical tools and collectibles are worth taking care of. The price of a Marine Tuf-Cloth is probably the cheapest insurance that anyone who cares about their gear can buy." The MSRP: \$8.95.

Flitz International (<http://www.flitz.com/>) markets its Gun/Knife Care Kit as a "green product that has no harmful chemicals like others." The kit includes a 1.7-ounce bottle of Rifle, Gun & Knife Wax, a tube of Metal, Plastic & Fiber-glass Polish, and a 1.7-ounce spray bottle of Gun & Knife Cleaner. The MSRP for the kit: \$19.99.



Sherwin-Williams adds Tri-Flow Superior Lubricant (<http://www.triflowlubricants.com/>) to the mix of knife maintenance products, a light-viscosity lube packaged in a drip-bottle applicator that comes with a straw for dispersing it into small areas.



Latama (<http://latama.net>) not only offers Quick Release Oil for lubricating and protecting folder pivots and other moving parts, but also a .01-inch-diameter orifice tip for applying the oil to hard-to-reach places.

NO OILY RESIDUE

“These are water-based products that don’t leave oily residue, saving you cleaning time,” says Flitz’s Scott Graham. “They clean, maintain and protect all metal, wood and plastic finishes, and leave a protective finish against rust and more that lasts for six months. Our wax can be used on any part of the knife. You apply the product and wipe it off with no drying time needed.

“A small amount goes a long way. The kit will handle over 100 knives.”

You can even clean cue balls with Pre-Lim Surface Cleaner from Cutlery Specialties (<http://www.restorationproduct.com/>). Pre-Lim Surface Cleaner also works on all metals, including precious metals, blued surfaces, enamel, porcelain, and fine china. The non-abrasive cleanser is particularly effective on eliminating and protecting against tarnish and oxidation.

“Just apply it with your finger or a non-abrasive cloth,” suggests Dennis Blaine of Cutlery Specialties. “It has the consistency of butterscotch pudding. Pre-Lim will not scratch even the finest of surfaces. It’s smooth.” Available in 2.25- and 7-ounce cans, the respective MSRPs are \$15 and \$25, plus shipping. Wholesale pricing is also available to knife dealers and retailers.

Thomas Buck of Clenzoil Worldwide (<http://www.clenzoil.com/>) says that Clenzoil Foaming Aerosol is unlike other aerosol propellants and protectants on the market today. “Other companies sell aerosols, but 99 percent of them use

highly flammable propellants like butane, propane or heptane. Some use compressed air, and compressed air contains up to 17 percent water,” he notes. “Who would knowingly spray water on a metal surface?”

“We are using medical-grade nitrogen as our propellant, a nonflammable drying agent that contains no water and is efficient and dense, taking less propellant to drive or spray the contents.”

How does it work? Buck says that, depending on how close a user holds the nozzle of the aerosol can to a knife part or blade, anywhere from 4-to-6 inches, or as close as an inch from the edged tool, the aerosol will either simply coat the blade or part, or foam up on it. Either way, it expands across the surface, and its “carrying capacity” forces it into nooks and crannies.

“Carrying capacity is the ability of a liquid or foam to lift and support solid materials like contaminants and separate them from the surface they were on,” Buck explains. “This suspension of debris is what allows it to clean out all of those hard-to-reach areas on a firearm, tool or knife.”

After the aerosol has been sprayed onto the knife part, Buck recommends wiping it off with a non-abrasive rag or lamb’s wool applicator. The MSRP: \$10.99.



Pre-Lim Surface Cleaner (<http://www.restorationproduct.com/>) works on all metals, including precious metals, blued surfaces, enamel, porcelain, and fine china. The non-abrasive cleanser is particularly effective on eliminating and protecting against tarnish and oxidation.



Tom Madden of Tai Lubricants (<http://lubekits.com>) says applying a small dab of Nye Rheolube 362 Grease to a folder pivot assures long-lasting life of the knife and ease of operation. Nye Rheolube is a synthetic formula, one Madden notes will not dry or gum up. The folder is a Bill Ruple two-blade slim trapper.

GOES ON WET, SETS UP DRY

It goes on wet and sets up dry, and it is another product that whisks away contaminants. “The dry-wax formula of White Lightning Knife & Tool Lube (<http://www.whitelightingco.com/>) contains release agents that shed dirt,” says Bill Coleman, director of sales and marketing for White Lightning. “As dirt comes in contact with the release agents, it binds to them and sheds off much the way a bar of soap works. It provides wear protection, lubricity and water resistance.”

Coleman suggests applying one drop of White Lightning Knife & Tool Lube at a time until you are satisfied with the lubrication. Allow a few minutes to dry, and in some cases there will be a visible wax residue you can wipe clean with a rag.

Available online at www.CaseXX.com and www.CaseKnivesHq.com, the MSRP for a 2-ounce bottle: \$5.79.

“All pocketknives need proper care if you want them to perform to their full potential,” reasons Meghan Pethtel, assistant product manager for Sherwin-Williams, which adds Tri-Flow Superior Lubricant (<http://www.triflowlubricants.com/>) to the mix of knife maintenance products. “Typically, blade steel is of high quality, but all metal will corrode over time from exposure to nature’s elements. You should occasionally lubricate the joints and springs of a pocketknife with a drop of Tri-Flow.

“Lubricants like WD-40 are ‘water displacers,’ hence the letters ‘WD’ in the name,” Pethtel explains. “All this does is prevent rust for a short period of time, and does not give you the longevity in rust protection or metal wear that Tri-Flow

does. Using Tri-Flow will also assure easier opening and closing of folding knives, and it's good to wipe the blades with a lubricated cloth to prevent rust."

A light-viscosity lube, Tri-Flow is packaged in a drip-bottle applicator that comes with a straw for dispersing it into small areas. It is available from www.lubricant.com. The MSRP for a 2-ounce drip bottle: \$4.99.

"Remember to keep your knife sharpened and lubricate it occasionally," Pethtel suggests. "A dull, rusty blade is more dangerous than a properly maintained one."



Bill Coleman, director of sales and marketing for White Lightning (<http://www.whitelightingco.com/>), suggests applying one drop of White Lightning Knife & Tool Lube at a time until you are satisfied with the lubrication. The knife is a William Henry mother-of-pearl-handle folder.

Wedge Your Edge

The CRKT PTS is a sharpener, pelvic tool and scraper all in one

By Dexter Ewing

A good percentage of Columbia River Knife & Tool's (<http://www.crkt.com/>) line is devoted to outdoor knives, primarily for hunting and camping. Quite a few of them are designed by custom knifemaker Russ Kommer (<http://www.russkommerkknives.com/content/>). Kommer is a former Alaskan hunting guide, so he knows what works and what doesn't in a knife. One of the more unusual items in the CRKT catalog is the Pelvic Tool/Sharpener, or PTS, designed by Kommer to augment his CRKT knife designs.

The PTS doubles as a pelvic tool splitter for dressing large game. Place the end of the tool on the pelvic joint of the animal, then baton the PTS on the top end to disjoint the pelvis. It saves you from using your knife as a splitting tool, preserving the cutting edge for the more delicate meat cutting and skinning operations.



Since the sides of Columbia River Knife & Tool's (<http://www.crkt.com/>) Pelvic Tool/Sharpener are rounded, diamond coated and tapered, the PTS can sharpen both recurved and serrated edges, including CRKT's Veff serrations here on the CRKT M21-14DSFG. (Dexter Ewing photo)



The PTS easily sharpens plain edges. Its length and width are about right for small and medium-sized fixed blades and folders. The knife is CRKT's "2 Shot"—like the PTS, also designed by Russ Kommer. (Dexter Ewing photo)

WEDGE SHAPE

The wedge-shaped PTS is 4.5 inches long, about 1.25 inches wide, and diamond coated on both sides. It is made of 3Cr13 stainless steel with a Rockwell hardness of 55-58 Rc, and weighs a scant 3.8 ounces. It also is a knife sharpener, featuring a 400-grit diamond coating that hones knives expediently in the field. Two grooves on one side are designed to sharpen such pointed tools as ice picks, etc. Both edges of the PTS are radiused. The edges can be used to sharpen recurved and serrated blades. A braided leather lanyard promotes easy extraction from a nylon belt/storage pouch.

A freehand model, the PTS must be held at a steady angle during sharpening. The tool's short length makes for tight quarters, so be mindful of how the cutting edge is oriented to your fingers for safety's sake. Due to its compact and flat nature, the multi-function PTS is easy to carry in a backpack, coat or cargo pants pocket. It also is an effective scraping tool.



The beauty of the PTS lies in its simplicity and utility as not only a knife sharpener, but also a joint splitter and scraper. (Dexter Ewing photo)

USE TIPS

I would not use the PTS on knives with blades 6 inches or longer. Remember, with diamond sharpeners you do not need to exert a lot of pressure. A light touch is all you need. I recommend you use water for lubrication when sharpening, though the PTS can be used dry as well. Be sure to wipe the sharpening surfaces with a paper towel or cloth to remove all fines (bits of steel) when finished.

The PTS easily sharpens most blade steels, including such stainless varieties as 440A, 420HC, AUS-8 and 440C, and higher grades like 154CM and CPM-S30V. Note: Do not wait until the blade is totally dull and/or tiny nicks develop in the edge before sharpening it because the PTS is not really designed to be a primary sharpener. It is more for touching an edge up in the field or for use in between regular sharpening. When you wash the PTS, towel dry it then let it sit and air-dry before you place it back into the sheath to prevent any rust from forming.

The PTS looks innocuous but is much more—a pelvic joint splitter, a sharpener for knives with plain, recurved and serrated edges, and a scraping tool. Even if you do not hunt and field dress game you will find it a handy and effective knife sharpener.

For more information on the PTS, contact CRKT, attn: L. Phelps, Dept. BL12, 18348 SW 126th Pl., Tualatin, OR 97062 800-891-3100 info@crkt.com, www.crkt.com.

Sharp Chart

Model Name: Pelvic Tool/Sharpener (PTS)

Company: Columbia River Knife & Tool

Designer: Russ Kommer

Type: Freehand model

Base Material: 3Cr13 stainless steel

Abrasive: 400-grit diamond coating

Weight: 3.8 ozs.

Width: 1.25"

Length: 4.5"

MSRP: \$39.99

Sharpeners Shape Up Knives

Electric, angle guide, stone or “V” style,
all will keep your blades keen

By Mike Haskew



Smith's Russ Cowen said the soft Arkansas stone, also known as the medium Arkansas, is the best general-purpose stone of all the natural ones. It "removes modest amounts of metal as it polishes the cutting edge. It's excellent for sharpening somewhat dull knives that still have a consistent cutting edge and need to be honed before use." An example is Smith's MP4L 4-inch Arkansas Stone. (Smith's photo)



Smith's MP4L sharpens large or small knives with plain edges and also assorted tools. The 4-by-1 3/8-inch medium (soft) Arkansas stone is a 600-grit abrasive. It includes a fabric pouch for storage and protection. (Smith's photo)

The sharpener is a natural companion to the knife. Serrated or plain, sooner or later an edge will need shaping up, and knife users around the world have their preferences. Among the variety of sharpeners to choose from, buyers can compare the hi-tech, scientific, traditional and innovative. Each has its merits, and the decision often comes down to personal preference.

EDGECRAFT ELECTRIC

A leader in knife sharpening options, Edgecraft (www.edgecraft.com) offers more than 100 choices in what company president Sam Weiner calls six “families” of sharpeners. In 1986, Edgecraft led with its Model 100 electric sharpener. Since then, continuing development has resulted in several electric models.

“We have moved along with the rest of the market,” Weiner assessed, “responding to trends in the knife business and what consumers like. Our Model 120 is the most popular electric sharpener we sell now, and is the first to use a new stropping abrasive we developed in house. We spent years developing it, and because the abrasive wheel is flexible it can take on serrated knives. We looked for a friendly way to do that, and it was quickly adopted by all segments of the market from sports to housewares.”

According to Weiner, the big advantage of an electric knife sharpener is the motor moves at 3,600 rpm and allows the use of a finer abrasive and provides better edge quality in a shorter timeframe, sparing you from a task that could become arduous.

“The basic advantage is the difference in perfection of the edge,” Weiner noted. “There is a limited amount of time people can devote to sharpening knives, and manual sharpening limits the attack angles on the edge. An electric sharpener provides a lot of freedom of motion. You can manage the direction and how abrasives hit the edge with many more degrees.”



The Lansky angle-guide models feature fully adjustable guide rods to maintain the same plane during all sharpening operations, a guide that guarantees your choice of consistent 17-, 20-, 25- and 30-degree angles, secure and exact blade positioning, and color-coded hone holders designed for comfort and finger protection. (Lansky photo)



The Lansky model LKC03 angle-guide sharpener includes a multi-angle flip-over knife clamp, one guide rod for each stone, specially formulated honing oil, extra-long knife clamp screws, a molded carrying case, and easy-to-follow, multilingual instructions. MSRP: \$34.99. (Lansky photo)

LANSKY ANGLE GUIDES

The Lansky angle-guide sharpening system has been around for more than 30 years, and company marketing manager Chris Fire points to it as the nucleus around which Lansky Sharpeners (www.lansky.com) was built.

“We have what is the premier angle-guide sharpener in the industry,” he said, “and I can say without qualification that we have the most accessories for our kit. Legend has it that Arthur Lansky LeVine was going to school to be a coroner or medical examiner and was frustrated with his tools getting dull. He didn’t feel there was a good way to sharpen them and came up with this kit.”

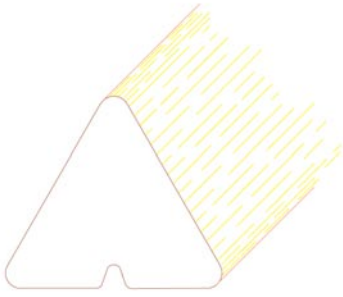
Today, Lansky offers seven angle-guide sharpening kits with entry-level manufacturer’s suggested retail prices at \$34.99 on up to a four-stone diamond system at \$99.99. The system involves inserting the knife into a clamp and selecting the sharpening angle: 17 degrees for a fillet blade, 20 degrees for skinning and hunting knives, 25 degrees for a chopping or all-purpose knife, and 30 degrees for knives used for such heavy jobs as cutting cardboard, wire, carpets, etc. Position the guide rod in the hone holder and move the stone into the blade much like a bench sharpener operates. Detailed instructions and a how-to video are available.

“Most guys get turned off sharpening,” Fire commented. “They don’t feel they can hold an angle consistently over a bench stone, and they end up getting a different angle on each side of the blade. With this controlled-angle system, you get a consistent edge every time.

“Versatility is important, too, and you can sharpen all kinds of cutting tools and blades with the angle-guide sharpener. It takes the guesswork out of sharpening serrated blades, and doesn’t require the art or finesse of a bench stone. You don’t have to have any sharpening experience to pick it up.”



Now in its fourth “V” variation, the Spyderco 204MF Tri-Angle Sharpener includes two medium-grit dark-colored triangle stones, two fine-grit white triangle stones, and an ABS plastic base with lid, two brass safety rods, and instruction booklet and DVD. (Spyderco photo)



The stones for the Spyderco 204MF are triangle shaped. The flat sides are for sharpening plain edge blades and the corners are for sharpening serrated blades. The groove (bottom) is for sharpening fishhooks, awls, punches, etc. (Spyderco image)

STONE SMITH'S

Smith's (www.smithsedge.com) has been in the Arkansas stone business for over 125 years, offering sharpeners with soft or hard stone abrasives consisting of 99.5 percent pure silica crystal formed under extreme pressure more than 340 million years ago. Arkansas stone, or novaculite, is found only in commercial quantity in the area around Hot Springs, Arkansas.

"The soft Arkansas stone, also known as the medium Arkansas, is the best general-purpose stone of all the natural stones," explained Smith's marketing manager Russ Cowen. "This stone removes modest amounts of metal as it polishes the cutting edge. It's excellent for sharpening somewhat dull knives that still have a consistent cutting edge and need to be honed before use.

"The hard, or fine, Arkansas stone is the world's finest finishing stone. [It] is the least aggressive of all the natural stones and removes the least amount of metal. It's excellent for finishing and polishing the cutting edge after sharpening on a more aggressive abrasive. This is the best stone to use for a razor-sharp cutting edge."

Cowen asserts that traditional stone sharpeners, with a patient user, are effective on any plain-edge blade. Though the investment of time may be longer, that does not diminish the quality of the sharpened edge.

"It may take you longer to get some knives sharp than others," Cowen added. "But that doesn't mean the sharpener works better on one knife than another. I just think it takes the user longer to sharpen some knives than others. However, the end result is still razor sharp.

"Just because you can get one knife blade razor sharp in 20 strokes doesn't necessarily mean the blade is more or less razor sharp than the knife you sharpened in 50 strokes. Personally, I like to get my knife sharp in the least amount of time I can. Traditional stone sharpeners do work quicker, not necessarily better, on softer steel blades or blades with a higher carbon content. I will tell you that traditional stone sharpeners don't work well for on serrations or gut hooks."

Cowen said the demand for traditional stone sharpeners has waned as the 18-to-35-year-old age group is less interested in spending half an hour sharpening a knife. "Life is too fast paced to spend that much time on one subject," he lamented.

"The art of using a traditional stone sharpener is simply not getting passed down to the younger generations due to a lack of interest," he continued, "flooding the market with disposable knives, and alternative sharpening products.

"I would add there are many positives to traditional stones. They're the best for finishing and polishing to a very sharp edge. They're also versatile. You can sharpen many styles and sizes of blades with them, and [they give you] the ability to control the thickness of the angle."



The Chef'sChoice Diamond Hone Three-Stage AngleSelect Sharpener Model 1520 by Edgecraft is a versatile diamond-abrasive electric model. It automatically positions the blade for sharpening at 15 degrees (Asian-style and sporting knives) in Stages One and Three, and at 20 degrees (Euro/American hunting and other sport knives) in Stages Two and Three. For a durable 15-degree edge, use all three stages sequentially. (Edgecraft photo)

SPYDERCO “V’S”

Spyderco’s “V” sharpeners (www.spyderco.com) operate based on a simple premise. The user most often holds a knife straight up and down in order to perform a task. Turning the knife one way or another quickly results in a different angle.

“When you’re holding a knife straight up and down, it’s pretty natural,” related Spyderco CEO and Blade Magazine Cutlery Hall-Of-Fame© member Sal Glesser. “That’s usually the way people slice with a knife in a kitchen. So, the principle of the ‘V’ sharpener is setting the angle of the abrasive itself, and, if you hold your blade straight up and down and draw the edge along the abrasive, you will achieve the proper angle.”

Louis Graves of Anoka, Minnesota, originally developed the modern “V” sharpener in the early 1970s, and the early versions were pyramid shaped. According to Glesser, Graves later learned the “V” shape was easier to use and converted his pyramid configuration to it.

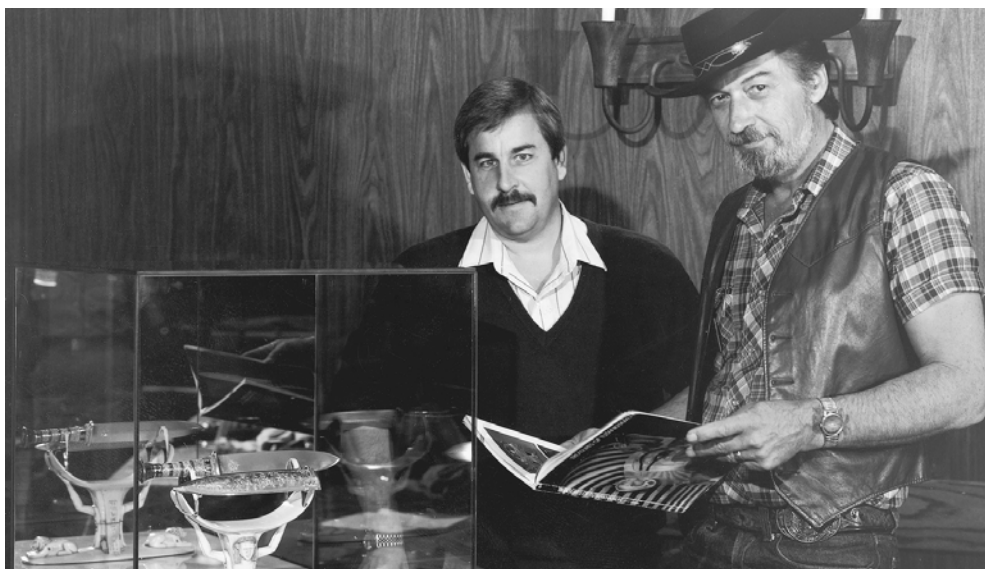
“The advantages of a ‘V’ sharpener are in its simplicity and its speed, as well as the angle control that’s provided,” Glesser opined. “One doesn’t have to clamp anything to the blade. Straight up and down remains consistent regardless of the width or thickness of the blade. Most of the ‘V’ sharpeners are made out of a ceramic or other type of abrasive that’s used dry, so they’re a lot cleaner to work with. We can also make them sharpen serrated edges as easily as plain edges.”

The primary Spyderco “V” sharpener is the Tri-Angle Sharpmaker, now in its fourth variation. Glesser cautions that the “V” model is meant for sharpening and is less efficient when major reprofiling is necessary.

Gramps Wasn't Far Off After All!

Leading collectors share their approaches to maintaining their knives

By James Morgan Ayres



Phil Lobred's collection includes a wide range of antiques and handmades, among the latter the repro of the King Tut Dagger by Buster Warenski. Proper handling and preservation are keys to knife care, noted Lobred—here (above, left) with Warenski (above, right) with the dagger on display at a past Solvang Custom Knife Show. (SharpByCoop.com knife photo; Weyer photo of Lobred and Warenski)

My grandfather gave me my first pocketknife when I was 5 and told me to keep it sharp, keep it clean and put a drop of oil in the joint every now and then. I have followed that advice ever since. However, it seems when you get into collector-grade knives, there is a little more to it than what Grandfather told me.

I interviewed four prominent collectors to get their views on what constitutes proper knife maintenance: Paul Lansing, whose collection includes the work of contemporary custom makers and antique knives alike; Phil Lobred and his collection of 19th-century San Francisco knives, along with custom and damascus pieces; Clarence Risner, who specializes in traditional pocketknives; and Tarek Mirshak, who collects tactical folders. Each has his own specialized methods of maintaining his knives.

Lansing said he has been building his collection for 66 years. It includes many rare, valuable antiques, including San Francisco push daggers, and dozens of one-off and specialty custom pieces from members of the Knifemakers' Guild (<http://www.knifemakersguild.com/>) and the American Bladesmith Society (<http://www.americanbladesmith.com/>). Many of Lansing's collectibles exhibit blades of damascus, wootz or "san-mai" steel, and have ivory and other natural components, which, as he noted, "can be tricky to care for."

His first piece of advice: Do not store a knife in a leather sheath. The oils from leather and the moisture it produces can promote rust. Lansing has the sheaths that come with custom knives autographed by the maker to aid in keeping track of them when they are stored separately from the knives.

If a knife needs oiling, he said any quality lubricant will do, such as A.G. Russell Knife Oil (<http://www.agrussell.com/>), or even the clove oil used on Japanese steel. He uses Simichrome (<http://simichrome.factoryoutletstore.com/>) only if a knife has hard-to-remove fingerprints or actual rust, and then only a tiny amount. Typically, he will give his knives a light coat of Renaissance Wax (<http://www.restorationproduct.com/>) for preservation and then rub them down with a soft cloth.

He stores his knives in safes, cabinets and display cases in an area serviced by a central heating, cooling and humidity-control system that maintains the temperature within a variation of 2° F. He said transporting his collection also raises issues of heat and humidity, which he solves by never leaving it in the trunk, transporting all knives inside the car only. He never leaves his knives in direct sunlight because the blades will heat up and transfer the heat to the handles, which might result in cracks if the scales are ivory or some other unstable material. Sometimes, he added, he uses a touch of baby oil on ivory to prevent cracking.



*Paul Lansing said he uses Simichrome only if a knife has hard-to-remove fingerprints or actual rust, and then only a tiny amount of the paste.
(Mary Lou Ayres photos)*

TRUE REFLECTION OF WORTH

Phil Lobred's collection features a wide range of antique pieces, as well as many custom knives, including the reproduction of the King Tut Dagger by Blade Magazine Cutlery Hall-Of-Fame© member Buster Warenski. Lobred said his antique knives require little care—if they are handled and preserved properly. Proper handling includes not removing the patina the knives may have acquired over the years. Simichrome can be used to remove rust but must then be wiped away.

Proper preservation includes coating the entire knife, handle and blade with anhydrous lanolin to create a kind of “gummy coat,” which is then polished clean. Afterward, a light coat of bowling alley wax fills in microscopic holes and fissures, thereby not allowing a place for rust to occur. Lobred then wraps his knives in a felt cloth and stores them in individual cases. Once again, the sheaths are stored separately.

He said his philosophy on maintaining knives was formed by something the late ABS master smith Jim Schmidt once told him: “Anything that requires care has a life, and the effort expended to preserve that life is a true reflection of its worth.” Lobred said each time he polishes his knives, he thinks of Schmidt's words.



Do not store a knife in a leather sheath. The oils from the leather and the moisture it produces can promote rust. Paul Lansingh has all sheaths that come with custom knives autographed by the maker to aid in keeping track of them when they are stored separately from the knives. Bob Loveless always signed his sheaths, thus easing the job of matching the knife with its appropriate sheath. The knife is the Loveless Dixon Fighter. (Buddy Thomason photo)



Tarek Mirshak said he handles his tactical folders often and wipes them down about once a week with a soft cloth. He stores them in a special stand and in general keeps them clean, with no special wax or oil. Shane Sibert's dress Monster Pocket Rocket in Chad Nichols damascus and G-10 is in Mirshak's collection. (photo courtesy of Shane Sibert)

THE COLLECTING CHEMIST

Clarence Risner has 400+ pocketknives with mother-of-pearl or stag handles and carbon steel blades. A chemist, he has some precise methods of preserving his collection, all supported by science.

First, he separates and isolates all knives with plastic scales. "All plastic is toxic," he noted. "It out-gasses and will stain bolsters and blades." He said he considers knives with plastic scales "using knives" and does not store them in sealed containers as he does his knives with grips of natural materials. He places camphor blocks inside the boxes with the plastic-handled knives. Celluloid, one of the leading old-time plastics, contains camphor. "Camphor draws and binds oxygen, which creates rust. No oxygen," he reasoned, "no rust."

Risner said he prefers liquid silicon to oil because the former preserves and protects better, though "it's a little harder to remove if you want to." He stores his knives in a special air-conditioned room.



Tarek Mirshak said he enjoys the camaraderie of shows as much as the knives. At the 2010 Tactical Knife Invitational, Mirshak (right) admires a Tim Galyean folder while Tom Mayo (in ball cap), Ed Wormser (wearing glasses) and an unidentified collector converge on Galyean (left) and his display table.

NEW GENERATION MAINTENANCE

Tarek Mirshak's collection includes tactical folders by such makers as Kit Carson, Cutlery Hall-Of-Famer Ken Onion (<http://www.kenonionknives.com/>), Shane Sibert (<http://www.sibertknives.com/>), Todd Rexford (<http://www.rexfordknives.com/>), Tom Mayo (<http://www.mayoknives.com/>) and many more. Many of the knives are dress pieces with damascus blades and ivory or mother-of-pearl handles.

Mirshak's maintenance methods vary considerably from the others interviewed. He said he handles his knives often and wipes them down about once a week with a soft cloth. He stores them in a special stand and in general keeps them clean, with no special wax or oil.

Granted, today's tactical folders, even those with natural handle materials, are built tough and made of new steels and hi-tech materials such as titanium, the latter which requires little maintenance. Moreover, one of Mirshak's motivations for collecting is so he can enjoy the knives by seeing and handling them often, which he does and he said aids indirectly in keeping them in top shape.

LESSONS LEARNED

I learned plastic is toxic, how to take care of valuable antiques, and a bit of chemistry (a subject I barely squeezed through in school). I also confirmed that Grandpa's advice wasn't bad after all. If you are a regular guy with a folder in your pocket, rather than a collector of fine knives, keep it sharp and clean and use a drop of oil every now and then.

Leave No Hone Unturned

What are the best sharpeners that knife enthusiasts tend to overlook and why?

By Joe Kertzman



Available in three diamond-coated grit sizes, the tapered rod of the DMT Diafold Serrated Knife Sharpener is designed to hone blade serrations in a sawing motion. The hinged polycarbonate handle halves fold around the sharpening rod when not in use, creating a portable package. The knife is a Gerber Bear Grylls lockback folder.

With so many choices of knife sharpeners on the market, not all can be best sellers, leaving many quality hones unknown to those other than the most hard-core practitioners. So how do you go about navigating the crowded marketplace to find the best sharpener for your honing needs? In interviewing sharpener company representatives, *BLADE®* left no hone unturned.

An often-overlooked area of knife sharpening is blade serrations, according to Mark Brandon, president of Diamond Machining Technology (DMT) (<http://www.dmtsharp.com/>). “Many people overlook sharpening the serrations on their blades, or think it’s too difficult. In fact, it’s quite easily done,” Brandon remarks.

For honing serrated pocketknives, hunters and kitchen knives, Brandon recommends the DMT Diafold Serrated Knife Sharpener. Available in three grit sizes—coarse, fine and extra-fine—the handheld sharpener features a conical diamond-coated rod tapering from 1/4- to 1/16-inch in diameter, and polycarbonate handle halves that swing open via stainless steel hinge pins, and when not in use, close around the rod to protect it. The manufacturer’s suggested retail price (MSRP): \$29.95.

“The folding handles make it portable and keep the diamond from scratching other things in your pocket. It can sharpen almost any serration size,” Brandon asserts. “It also doubles as a mini-steel. Perhaps owners of serrated knives don’t appreciate how great their blades will perform with tuned-up serrations. Once demonstrated, almost everyone understands how easy it is to use.”

To use the Diafold Serrated Knife Sharpener, a serrated or semi-serrated blade is laid flat on its side on a sturdy surface. The user lifts the edge, blade spine down, at a slight angle until the serrations are parallel to the surface. With the sharpener held so that the rod is also parallel to the surface, it is slid into one serration at a time.

Using short, half-inch strokes in a sawing motion, the user sharpens each serration, and while doing so, rocks the rod back and forth as it sharpens. The area and diameter of the tapered rod used depends on the width of each serration. For a video demonstration, visit <http://dmtsharp.com/video/serrated.htm>.

The Smith’s (<http://smithsedge.com/>) 8-Inch Diamond Tri-Hone is designed specifically for sharpening plain-edge blades, including hunters, kitchen knives, pocketknives, fillet knives and tactical fixed blades and folders. Specifically, the sharpener is meant for blades with single- or double-bevel flat grinds.



The diamond abrasive rods of the Model 415 Chef'sChoice Exact-V Sharpener are each set at a 20-degree angle, together forming a "V" extending up from the base. Held vertically, edge down, against one side of the precision angle guide, the blade is pulled between it and the sharpening rod, then alternated to the other side of the guide for honing the second blade bevel.

THREE-STONE SYSTEM

A stationary three-stone sharpening system, the Diamond Tri-Hone includes two interrupted-surface diamond stones and a medium-grit Arkansas stone. Each 8-inch stone is mounted on one side of a triangular holder that is placed horizontally in a base with the desired stone facing up, parallel to the work surface.

The coarse- and fine-grit diamond stones feature overlapping-hole surfaces that reportedly aid sharpening by trapping and holding metal filings that build up during the honing process, so the surface remains clean and clear. The natural Arkansas stone, used for finishing the edge, removes moderate amounts of metal as it polishes.

“It just feels substantial and of high quality. The base is molded plastic with non-skid feet, making it sturdy and durable, and it is easy to clean,” says Russ Cowen, marketing manager for Smith’s. “The diamond stones are coated with mono-crystalline diamonds, and the Arkansas stone is quarried from mines located right here in central Arkansas and owned by Smith’s. This allows us to select only the highest-grade natural stones.”

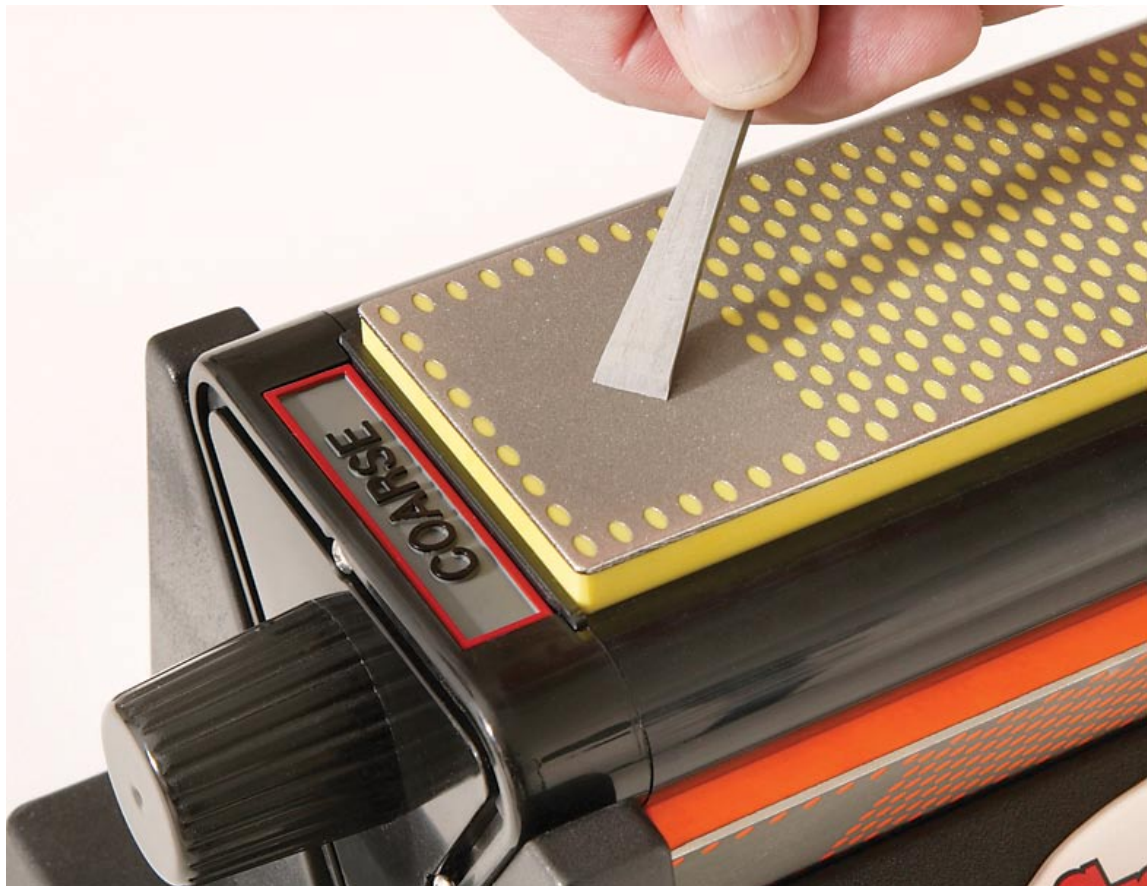
Cowen says the natural and diamond stones range from 325 to 1,200 grit apiece, and each diamond stone includes a “Micro-Tool Pad” area with an uninterrupted surface. Extras include an angle guide, 4-ounce bottle of honing solution, and care and use instructions. The MSRP: \$99.99.

“This sharpener is better suited for experienced knife enthusiasts and users because of knowledge needed for sharpening angles and bevels, as well as the skill level required to use the hone,” Cowen explains. “It also takes a patient and persistent user who is more worried about end results than the process it takes to achieve them.”

Val Gleason, public relations and communications manager for Edgecraft (<http://www.edgecraft.com/>), says the Chef’sChoice Model 415 Exact-V Manual Sharpener is “probably best suited for a knife enthusiast or ‘do-it-yourselfer’ who enjoys the rituals and methods of sharpening and honing the edge.”

Gleason notes, “The quality sharpener could be overlooked because we have so many critically acclaimed electric and manual knife hones that are perceived as more user friendly, involving less methodology and effort. For practical use, the base of this sharpener converts into a compact, lightweight and portable storage box to hold the honing rods and angle guides. It’s ideal for use in the field, at camp or at home.”

The Exact-V Manual Sharpener features a precision spring-loaded angle guide, and two-sided diamond abrasive rods (coarse and fine) mounted at preset angles into a plastic base. The abrasive rods are set to hone 20-degree (40 degree inclusive) bevels on pocketknives, hunters, fillet knives, and outdoor and kitchen knives.



A stationary three-stone sharpening system, the Smith's 8-Inch Diamond Tri-Hone includes two interrupted-surface diamond stones and a medium-grit Arkansas stone. Each interrupted-surface diamond stone also includes a "Micro-Tool Pad" area with an uninterrupted surface.

GUIDING IT THROUGH

The user holds a knife edge down, with the face of the blade resting against one side of the vertical guide, and pulls the blade, from rear bolster to tip, lifting the handle as the blade is pulled through so the curved edge remains on the diamond

surface all the way to the point. The blade is alternated to the other side of the vertical guide, repeating the steps to hone the opposite bevel.

Then the rods are rotated 180 degrees to the fine abrasive side, and the steps are repeated a second time to polish each bevel.

“It puts an exceedingly sharp edge on a broad range of knives,” Gleason assures, “providing users with the ability to accurately reproduce a double-bevel, 20-degree edge. It is engineered to control the edge pressure on the abrasive, and the angle guide can be removed for use as a traditional V-type sharpener.” The MSRP: \$39.99.

Lindsey Phelps of Columbia River Knife & Tool (<http://www.crkt.com/>) says the VEFF Sharp diamond-grit handheld sharpener will hone virtually any serration of any diameter. “The VEFF Sharp works great on serrated and plain-edge knives, gut hooks, seat-belt cutters, wood chisels, wood-carving and lathe tools, router bits, punches, scissors, saw chain and much more,” Phelps insists.

The VEFF Sharp includes a textured-aluminum thumb-screw-style handle, two 600-grit diamond rods and a nylon storage pouch. The interchangeable rods, threaded to screw into the grip, are not only tapered but stepped, embodying six distinct diameters between the two of them. Depending on which rod you use, the sharpener stretches 8.5-to-9 inches long and weighs between 2 and 2.9 ounces. The MSRP: \$39.99.

“The six diameters of rod allow the user to sharpen any serration, and the generous length of each lets users get a decent stroke on each effort,” Phelps determines. “The entire package, including the compact nylon storage pouch, is lightweight, so it’s easy to throw into your hunting gear and take along for a quick tune-up on the go.

“It’s also great in the shop. The 600-grit diamond surface is nothing new, but it’s a good all-around grit for most applications, and it works well for everyone regardless of experience level. Yet, the sharpener is fairly new, and frankly we’re still getting overlooked because most knife companies are not considered by enthusiasts for sharpeners, believe it or not.”

Also incorporating a 600-grit diamond-coated surface is EZE-LAP’s (<http://eze-lap.com/>) Model 591 oval steel. The oval shaft is 3/4-inch in diameter and 4 inches long, anchored by a lightweight yet durable fiberglass-reinforced poly-carbonate handle that folds around the shaft and becomes a carrying case when not in use. The MSRP: \$19.75.



Possibly the most unusual of all knife sharpener designs, the duck-foot-shaped alumina-ceramic Spyderco 308 Golden Stone is nonetheless curved and angled to hone plain edges, “SpyderEdge” blade serrations, and, according to Spyderco’s Joyce Laituri, scissors, pointed tools and even ski or snowboard edges.



Not only tapered, but also stepped, the 600-grit, diamond-coated rods of the Columbia River Knife & Tool (CRKT) VEFF Sharp handheld hone embody six distinct diameters between the two of them. “The six diameters of rod allow the user to sharpen any serration, and the generous length of the rods lets users get a decent stroke on each effort,” says CRKT’s Lindsey Phelps.

BEST GENERAL-PURPOSE GRIT

“The fine grit is our best general-purpose grit and the top choice for sharpening knives,” says Ralph Johnson, vice president of EZE-LAP Diamond Products. “It is made with the same attention to detail that has earned EZE-LAP a reputation for high-quality, affordable U.S.-made products.

“The oval shape lends itself for use by all levels of knife-sharpener enthusiasts. The wider point of contact makes a great choice for multiple applications, and is more forgiving for the novice,” he adds. “The fine diamond coating is a blend of diamonds developed by EZE-LAP that, when combined with a unique bonding method, ensures a long-lasting, durable surface.

“I think there are so many choices on the market today that many unique products get overlooked,” Johnson reasons.

Shaped like a duck’s foot, the Spyderco (<http://www.spyderco.com/>) 308 Golden Stone seems to qualify as a unique product. “It is curved and angled to sharpen everything with an edge,” claims Joyce Laituri of Spyderco. “Positioning the stone vertically, foot-side down, on a tabletop allows the stone to tilt, lifting one edge up and creating a 20-degree sharpening angle [40-degree total angle] to hone blades.

“Both sides of the stone have an elliptical edge with a large radius for sharpening plain edges, and a smaller radius for honing SpyderEdges or serrations,” Laituri adds. “Set vertically on its side, the stone creates a 12.5-degree angle for scissors, while a groove running the stone’s length sharpens pointed tools. The suede carrying case can be used for stropping and as a skid-resistant pad for counter-top sharpening.”

The fine-grit, alumina-ceramic unit needs no oil or water, and Laituri says the 308 Golden Stone also can be used as a flat stone. The MSRP: \$199.95.

“It’s large enough to sharpen long edges, like skis and snowboard edges, and small enough to use on a tabletop or hold in a hand to take directly to what is being sharpened,” she notes. “Maintaining a knife’s usefulness requires sharpening the blade. A sharp knife is a safe knife and is the reason Spyderco produces high-quality ceramic sharpening stones.”



The 3/4-inch-diameter oval rod of EZE-LAP’s Model 591 sharpener lends itself to use by all levels of knife-sharpening enthusiasts, according to Ralph Johnson, vice president of EZE-LAP Diamond Products. He also notes that the wider point of contact makes a great choice for multiple applications, and is more forgiving for the novice.

A Moving Experience

How to maintain natural handle materials that shrink and swell

By Stephen Garger



Some ivories have a series of hairline cracks called crazing, cracked ice or crosshatch checking. Don Hanson (www.sunfishforge.com) finds the trait desirable. “Old checks or cracks in fossil ivory rarely cause any problems and I love the way it looks,” he said. The handle of Hanson’s sub-hilt is an example. (Chuck Ward photo)

There is an aura of warmth that surrounds a knife with a handle constructed from a natural material. Such a grip tends to enhance the knife’s appearance and lends a more personal touch. On the other hand, natural materials can crack, shatter or weather* over time, whereas the popular synthetics such as Micarta®, G-10 and carbon fiber are relatively immune from such concerns.

Though extremely beautiful, some knife handles of natural materials, especially ivory, may expand when transported from cold to warm climes and shrink when going from warm to cold—a.k.a. move—and may crack as a result. “I’ve

taken a knife from Hawaii to Las Vegas and the material shrinks,” veteran knifemaker Stan Fujisaka said. “Then I bring the knife home to Hawaii and two weeks later [the handle material expands] back.” He added that even the ancient ivories shrink and expand.

“Natural materials do expand and contract with temperature and humidity changes,” ABS master smith Don Hanson (www.sunfishforge.com) observed. “Ancient ivory does not seem to be as problematic as elephant ivory, but can still crack.”

Founder and owner of William Henry Studio (WHS, www.williamhenrystudio.com), Matt Conable agreed there are all kinds of problems with ivories. “We make a lot of knives using ivory since it’s very attractive, and we get almost no [customer returns] due to shrinking or cracking,” he said. “That’s because about 98 percent of the problems with those materials occur before the knives go out the door, though in the process a lot of the materials get scrapped.”

Time is the most important element in preventing shrinking and cracking on finished knives. “The more surface area [that is, the more thickness] you have, the less subject the material is to problems,” Conable observed. “We slice it into coupon-sized rectangular shapes that will eventually be knife slabs and sit on it for at least four months until it gets darn good and dry, and then we stabilize all of it to prevent cracking.”

For Hanson, it all has to do with the materials drying and wanting to move. “I keep ivory at least one year”—usually longer—“before I use it,” he said. “That way I know it’s dry and acclimated.”

Another important element in working the materials has to do with familiarity that comes through experience. For example, WHS uses a variety of natural handle substances. “We go to great lengths to pay attention to the nuances of each material we use,” Conable noted. Added Hanson, “After a while, you get to understand the materials and know when they’re dry and somewhat stable.”



To keep ivory from cracking, Stan Fujisaka soaks it in anti-freeze, while Don Hanson soaks it in, or wipes it down, with mineral oil. Gary Williams (www.scrimbygarbo.com) scrimshawed the ivory handle of Dennis Friedly's (www.friedlyknives.com) art fighter. The engraving is by Gil Rudolph. Overall length: 14 inches. (Point Seven photo)



Oosic is another material that requires care to prevent movement. Russell Townsley's utility hunter sports an oosic handle with water buffalo and red bone fittings. The 4.25-inch blade is Alabama Damascus (<http://www.alabamadamascussteel.com/servlet/StoreFront>). (Chuck Ward photo)

CRACK PREVENTION

To prevent a material from cracking, Fujisaka has tried several approaches, including soaking it in anti-freeze. "It stabilizes a little bit but there is still movement," he related. Hanson recommends either soaking or wiping the handle in mineral oil a few times a year. "The maker can be the biggest help by making sure the material is very dry before it's used, and also not overheating it when working it," he said.

Along with treating the ivory with various solutions, it is also important to store the knife properly.

"Dryness seems to lead to the handles cracking," observed knife purveyor Don Guild (www.guildknives.com). "The ideal thing would be to keep the humidity up, perhaps by using a vaporizer where the knife is stored." Hanson agrees. "Mineral oil will help, but adding humidity to the room the knives are stored in is likely the best single thing collectors can do," he advised. Guild also suggested soaking the knife in water or glycerin with water as a possible way to remedy a small crack. "You can wet paper towels and wrap the knife up in them," he said. "Sometimes the crack will close back up doing that, but then sometimes not." Fujisaka warned to not display your knife on a fireplace mantle during the winter, as the heat from the fire will cause the scales to expand.



John Bartlow uses ancient walrus ivory for his folder, which comes with a crocodile-skin pouch sheath. Closed length: 4.25 inches. The engraving is by Jere Davidson. (Point Seven photo)



According to Stan Fujisaka, mother-of-pearl does not shrink or expand. Kevin Casey's (www.kevincaseycustomknives.com) pearl folder features a 3 1/8-inch blade of his feather damascus steel. (Buddy Thomason photo)

NON-MOVING NATURALS

What natural materials should those who do not want to be bothered with the movement problem choose? “Pearl is wonderful. It’s stable and does not shrink or expand,” Fujisaka noted, “but don’t drop it because it’s brittle.” Conable concurs. “Shell is brittle and can crack, but only if you drop it. Otherwise it is tough as nails,” he advised. “The Victorian Era produced a lot of pocket and fruit knives that were made with [shell], and if you buff them, the result is just amazing.”

“Stag and pearl are likely the most stable natural materials,” Hanson offered. “That said, I use more fossil ivory than any other material and rarely have a problem due to my prep and practice that comes along with using it for so long.” Experience with the material is important and Hanson warns that a “new maker can have all kinds of problems with it.” As Conable pointed out, “Every fossil is a separate animal in terms of how stabilizing works best for each in getting maximum rigidity without being so brittle the material will crack with a finger flick.”

Guild said there appears to be fewer problems with warthog ivory, and mammoth ivory seems more stable. Fujisaka indicated both ancient walrus ivory and oosic have movement. “I favor camel and giraffe bone because they are very dense,” he said. “Even cattle bone can have a porosity problem.”

Some ivories have a series of hairline cracks called crazing, cracked ice or crosshatch checking. Hanson finds the trait desirable. “Old checks or cracks in fossil ivory rarely cause any problems and I love the way it looks,” he said. “These tend to be surface cracks, not running deep and following the grain, and it’s all done before [the ivory] comes out of the ground. New cracks are what we want to avoid.”



Don Hanson said stag is one of the most stable of natural handle materials. Keith Bagley (www.oldpineforge.com) uses sambar stag on his plus-size damascus bowie. Overall length: 17 3/8 inches. (Point Seven photo)

PINS VS. SCREWS

What about the maker? How can he keep the handle from cracking while constructing the knife?

“Knives screwed together have more wiggle room for the materials but the use of screws is predicated on thread set, and our screws are special made,” Conable said. “Using pins is tough because there is no room” for the material to move.

Hanson agrees that attaching the material with screws may be a good idea. “I’ve never seen a crack around a screw, so this could be a better way,” he opined. “The screws allow the ivory to move around more, where pins that are peined too tight or too close to the edge of a handle may lead to cracks.” Fujisaka concurs that the material will develop cracks if the pins are too tight. “Epoxy [is] good for securing natural handle materials,” he said. “Plus, folder scales are very thin and it’s a good idea to dovetail them.” Guild makes it unanimous, saying the use of pins disrupts the pressure on the material, which in turn causes cracking.

Of course, you can avoid the problem altogether by opting for a synthetic handle material.

“Older Micartas would move depending on climate,” Conable advised, “but I haven’t worked with any recent-generation synthetics that have a problem.” Opting for synthetics, though, eliminates the inherent beauty that nature creates. As in most things concerning knives, ultimately the buyer must decide. “Any time you use organics, the risks go up,” Conable said. Guild may have hit the pin on the head.

“Ivory is gorgeous,” he noted. “Sometimes it turns to a nice, rich, amber color and is just beautiful.”

That kind of assessment seems to make the organic handle risk one worth taking.

**Some weathering-caused patinas can result in an antique look that many find appealing. In some instances, such patinas can add not only to the durability of the material but also to the value of the knife.*



Stan Fujisaka said he favors giraffe and camel bone because they are dense materials resistant to moving. Arthur Lynn’s D-guard bowie boasts a giraffe bone handle. Overall length: 15.5 inches. (Point Seven photo)



Of course, you can avoid the moving problem altogether by opting for a synthetic handle material. RJ Martin (www.martinsite.com) goes synthetic with lightning-strike carbon fiber for the inlay on his “Overkill” flipper. (SharpByCoop.com photo)

The Knife User's Best Friends

One sharpener or even a few is right for everyone

By Dexter Ewing

Today's sharpeners reflect constant improvement in design and function developed over many years. They are easy to use and produce excellent results with minimal investment of time and effort. For knife consumers, there is an overabundance of choices. One sharpener or even a few is right for everyone.



Smith's Ceramic Edge Pro (<http://smithsedge.com>) offers both manual and electric sharpening in one easy-to-use unit. For very dull knives, use the manual carbide edge-setting feature (second slot from the right), followed by sharpening (as shown) on the interlocking ceramic-abrasive wheels, which also are good for edge touch ups. The ceramic-abrasive wheels are designed to provide a burr-free edge without marring or scratching the blade. (photos courtesy of Dexter Ewing)

INTERLOCKING CERAMIC WHEELS

Smith’s Abrasives (<http://smithsedge.com>) recently introduced the Ceramic Edge Pro electric model, which combines both quality materials and what is reportedly a new technique to sharpening.

“[The Ceramic Edge Pro] will produce a true factory-quality [or better] cutting edge on your knife using interlocking ceramic sharpening wheels,” declares Russ Cowen, Smith’s marketing manager. “Interlocking wheels deliver fast and precise sharpening of both sides of your knife blade equally and at the same time.”

Electric knife sharpeners that work on one side of the blade at a time often require an extra finishing step to remove the burr, Cowen notes, and they also can scratch the blade. “Now, make those interlocking wheels out of a material that is very forgiving,” he maintains, “and you eliminate the possibility of marring or damage to your blade.” Smith’s patented interlocking wheel design also is less abrasive on the blade, so it will extend the life of your knives. The wheels sharpen at a 45-degree angle—22.5 degrees on either side of the blade. Meanwhile, carbide blades affixed in a predetermined angle allow you to manually pre-set the cutting edge on very dull knives.

The Ceramic Edge Pro has a dedicated serration slot designed to revive fully serrated bread knives and steak knives, as well as serrated folders. However, Cowen advises to use the manual, pull-through slots only as needed. “They are not intended as a starting point every time you sharpen your knife,” he says.

The Ceramic Edge Pro sharpens just about all blade widths—“any knife with a grind on both sides of the blade,” Cowen smiles. MSRP: \$99.



The Chef’s Choice 1520 Angle Select (<http://www.edgecraft.com>) sharpens Asian knives at a 15-degree angle, as well as other common kitchen knives at a 20-degree angle. The left guide of the 1520 is the 15-degree setting for Asian knives, the middle guide (marked “Eur/Amer”) is the 20-degree setting for standard kitchen and sporting knives, and the final guide is for stropping. (photos courtesy of Dexter Ewing)

GOTHIC-ARCH EDGE

The 1520 Angle Select may be the most versatile powered sharpener from Chef's Choice (<http://www.edgecraft.com>). It sharpens both European/American knives as well as Asian blades. The former use the sharpener's pre-set 20-degree angle, the latter the 15-degree setting.

Val Gleason of Chef's Choice says the 1520 "is engineered to provide astonishingly sharp edges using highly precise guides that automatically position the knife." It uses a multi-stage sharpening system that combines diamond-abrasive and patented flexible stropping discs. The discs work together to create what Gleason calls a "gothic-arch" edge profile that "stays sharper longer and is more durable."

She indicates the 1520 will effectively sharpen a broad range of knives, including "all quality cutlery, fine edge or serrated blades, and Santuko and traditional Japanese-style single bevel edges, like the thicker Deba-style blades." It is also designed for sporting cutlery and pocketknives.

The 1520 offers two choices of housing finishes, including a molded plastic version. MSRP: \$169.99. There is also an upscale model in a brushed-metal housing to complement the look of today's modern kitchen appliances. MSRP: \$199.99.



With its 8-inch-by-3-inch dimensions, DMT's (www.dmtsharp.com) D8EE extra-fine-grit diamond stone is designed to sharpen a diverse range of blades, from pocketknives to household cutlery. The base can be used to set the D8EE up a couple inches from the tabletop for knuckle clearance and ease of use. (photos courtesy of Dexter Ewing)

THE "STEEL WATER STONE"

Diamond Machining Technology's (www.dmtsharp.com) D8EE stone provides a polished edge as a final step to sharpening knives and woodworking tools. According to Stan Wilson, DMT technical director, the D8EE is also known as the "steel water stone."

“[It] is the finest [smallest-micron-diamond]-bonded whetstone available anywhere,” he opines. “Despite the small size of the diamond crystals at three microns, it will still sharpen quickly due to [its] literally millions of cutting edges. The more it’s used, the better the polished finish it will provide.”

Originally introduced in the woodworking tool market, the D8EE is becoming increasingly popular in the knife and sporting cutlery market, Wilson notes. Its 8-inch length, 3-inch width and 3/8-inch thickness makes the stone ideal to use on a vast selection of knives, including pocketknives, tactical folders and fixed-blade hunters.

No matter the knife or tool you sharpen with the D8EE, Wilson recommends using a combination of liquid dish soap and water to help float away the fines, the tiny metal particles abraded during sharpening. “Adding three or four drops of liquid dish soap to three ounces of water in a small spray bottle provides optimum performance,” he says. Along with holding a consistent blade-to-stone angle, it is the key to maximum effectiveness in using the D8EE. “The D8EE is effective on all knife styles and materials,” Wilson concludes, “including the hardest steels and ceramics.”



The Lansky Turnbox (<http://lansky.com>) comes in three models: the two-rod version (MSRP: \$11.99), which has a pair of 5-inch alumina ceramic rods; the four-rod Deluxe Turnbox, which has two pairs of 5-inch alumina ceramic rods in medium and fine grits (MSRP: \$21.99); and the two-rod diamond version (MSRP: \$24.99).

NO MORE GUESSWORK

Lansky's (<http://lansky.com>) Turnbox series of sharpeners takes the guesswork and frustration out of achieving a razor-sharp edge with minimal investment of time.

“This is the fast and easy knife sharpener that is simple to use, regardless of your sharpening experience,” notes Christopher Fire, Lansky marketing manager. “The four 5-inch alumina ceramic rods”—two medium grit for sharpening and two fine grit for finishing—“store in the versatile wood turnbox that’s the sharpening rod holder.” The Turnbox is compact and lightweight enough to carry in a backpack or store in a tackle box or toolbox.

The base of the Deluxe Turnbox consists of a hardwood block with two sets of holes drilled into it. Also drilled in are two sharpening angles of 20- and 25-degree settings. The former is best for culinary knives such as fillet, butcher, paring and chef’s knives, the latter ideal for sporting cutlery like hunting, camp and tactical knives.

“The angles are pre-set, which eliminate the human error that can make benchstone sharpening daunting,” Fire says. He adds the Turnbox will not sharpen serrations, for which Lansky offers dedicated sharpeners.

The Turnbox comes in three models: the two-rod version (MSRP: \$11.99), which has a pair of 5-inch alumina ceramic rods; the four-rod Deluxe Turnbox, which has two pairs of 5-inch alumina ceramic rods in medium and fine grits (MSRP: \$21.99); and the two-rod diamond version (MSRP: \$24.99).

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