

## Sharpen odd shapes

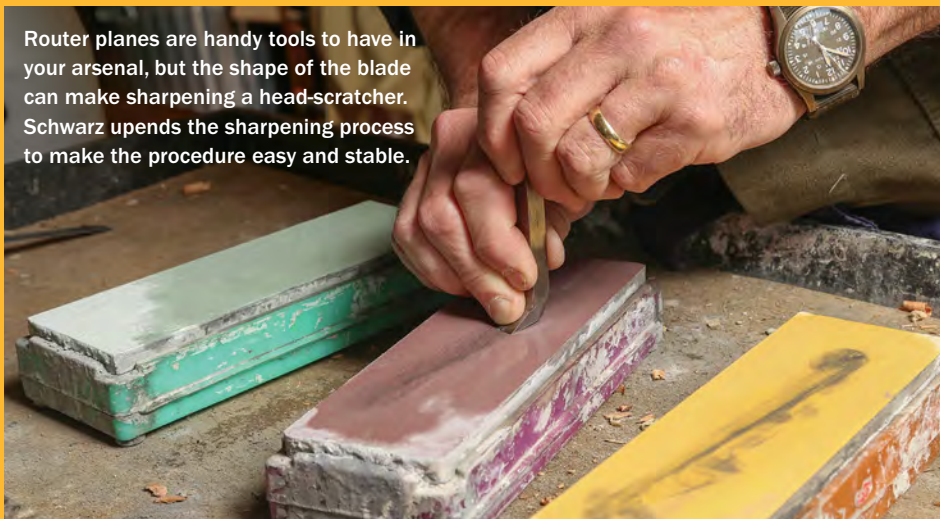
SANDPAPER, DOWELS,  
AND WOOD SCRAPS SOLVE  
UNIQUE SHARPENING  
CHALLENGES

BY CHRISTOPHER  
SCHWARZ



### L-shaped router-plane blade

Router planes are handy tools to have in your arsenal, but the shape of the blade can make sharpening a head-scratcher. Schwarz upends the sharpening process to make the procedure easy and stable.



**How do you sharpen an L-shaped blade?** A router plane is very useful for trimming tenon cheeks and refining hinge mortises or dados. Its L-shaped blade makes these tasks possible, but sharpening the blade is counterintuitive. Instead of starting with the bevel, Schwarz focuses first on the flat bottom face of the blade. He takes it through the grits holding the shaft of the iron vertical, as shown above, which makes it easy to keep the bottom flat on the stone. This process creates the burr. He moves on to removing the burr with one pass on a fine stone (right).



## Sharpening kit for oddball blades

Along with your sharpening stones, a few items such as dowels wrapped in sandpaper, cylindrical sharpening stones, and honing compound used in creative ways will help you sharpen blades that aren't straight and flat.



**A new way to use abrasives.** To reach into tight curves and rounds, use dowels in different sizes. You can wrap wooden dowels with diamond lapping film or sandpaper, or buy a pack of dowel-shaped sharpening stones in different diameters.



**Sanding dowels.** Adhere diamond lapping film to a sanded dowel and mark the grit on the end.



**Honing compound.** Charge a dowel with honing compound by simply rubbing the compound onto the dowel.

Creating a wicked edge on a straight chisel or plane blade is something a woodworker can learn in less than an hour. But many despair when it comes to sharpening curved or odd-shaped tools. It seems like you need lots of practice or expensive gear.

The truth is you just need sharpening stones, some dowels, scrap wood, sandpaper, and a slightly different mindset for your sharpening process.

When working with odd-shaped tools, it is always best to touch up their edges frequently, a practice common among carvers. When I finish carving a seat with my travisher, I always touch up its edge before putting it away. After a decade of this practice I have never had to grind the bevel.

### Make sense of abrasives

Comparing different abrasives can be difficult. The United States and Europe have different ways of grading sandpaper. And one manufacturer's 1,000-grit stone might not be the same as another's. One simple and reliable way to compare abrasives is to look up their particle size in microns. One micron is one-millionth of a meter. When you compare microns to microns, you get an idea how fine or coarse an abrasive is. For example, 80-grit sandpaper (in the U.S.) uses particles that are 192 microns across; 220-grit paper is 66 microns across. A typical 1,000-grit sharpening stone has particles that are 14–16 microns. And honing compound is 1 micron. The micron size of any sharpening medium is available online from manufacturers.

### The trick is to know which grit to buy

For initial edge shaping, most people use a soft Arkansas stone or a 1,000-grit waterstone. In the U.S., that equates to sandpaper that's about 400- to 700-grit.

For polishing, a translucent Arkansas or 5,000-grit waterstone has a particle size of 3 to 6 microns. In the U.S., that's 4,000- to 8,000-grit micromesh sandpaper. For additional polish, you can use sandpaper with a 2-micron size particle—or 12,000-grit micromesh sandpaper.

For some tools, I'll rub honing compound directly on a dowel. Most honing compounds claim to have a 1-micron particle size, so they are ideal for the final polish.

### Move the burr on router planes

Many beginners struggle with sharpening the L-shaped blade of the router plane, particularly working the bevel without rounding it over or creating a skewed edge. The solution is to reverse your sharpening process.

With most tools you first sharpen the bevel with coarse and then fine grits. Then you remove the burr on the flat face with your finest polishing medium. On router plane blades, I reverse the procedure. I first work the flat face with coarse and then fine grits. It's simple work to rub the flat face on your stone. Then I remove the burr by swiping the bevel across my finest stone once.



I use this same procedure on other tools such as block planes with skewed irons (the skew has to be perfect, or the tool won't function) and swan-neck chisels. It's also a handy trick to know when you get into tools that have a simple curve.

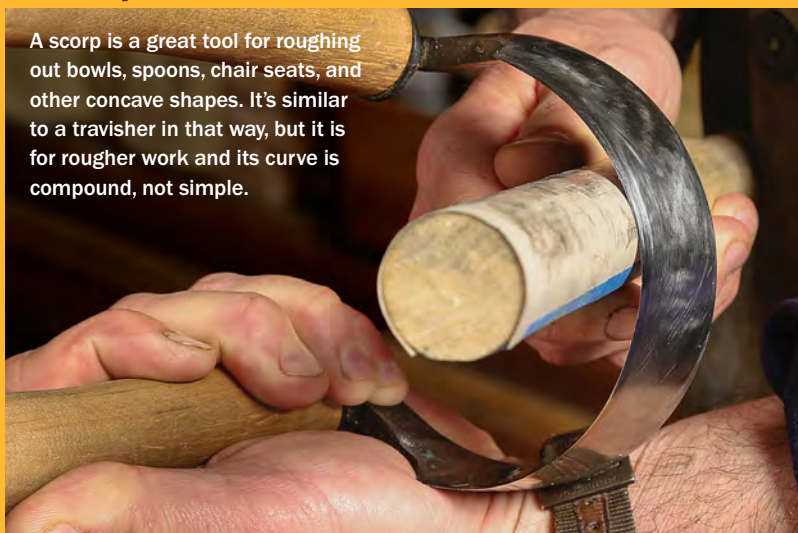
### The simple curve of the travisher

Simple curves bend only in one dimension. Compound curves curve in two dimensions, the way a turner's fingernail spindle gouge does. Sharpening simple curves is easy. Begin by stoning the flat face, just like with the router plane. Rock the flat side of the blade along the stone and move up the grits.

To remove the burr on the bevel side of the tool, you need to learn a new trick. For years I made slipstones from old, broken sharpening stones, which are easy to shape with a stationary belt or disc sander. Then I started using sticky-back sandpaper adhered to dowels. I mostly use 1¼-in.-diameter dowels, but small dowels come in handy

## Scorp

A scorp is a great tool for roughing out bowls, spoons, chair seats, and other concave shapes. It's similar to a travisher in that way, but it is for rougher work and its curve is compound, not simple.



**Inside and outside the curves.** For inside curves, Schwarz uses abrasives adhered to a dowel. On the outside of the curve, a flat stick with an abrasive adhered to it does the trick. Always hold the handle of the tool like the neck of a violin and move the abrasive like the bow. Don't let your hand get in front of or near the cutting edge.



### Online Extra

To watch a video of Schwarz sharpening at the table saw, go to [FineWoodworking.com/305](http://FineWoodworking.com/305).



**A table saw alternative.** A metal plate designed to convert a table saw to a disc sander can be used to sharpen odd-shaped tools. One face has 200-grit sandpaper for grinding. The other face has MDF paper for polishing. Tilt the plate to match the tool's bevel. Charge the MDF with polishing compound. Turn on the saw and gently touch the blade to the spinning wheel.

for tools with tight curves. You can use fancy diamond film (Lee Valley Tools sells a set designed for sharpening woodworking tools) or you can use sandpaper from the hardware store. A swipe or two with the sanding dowel removes the burr and continues to polish the bevel.

### Hand screws lend a helping hand

Sometimes you can't hold a tool well enough to sharpen it. A traditional spokeshave or travisher with forged tangs or a small hatchet are typical examples. A solution is to find some way to hold the tool and then bring the abrasive to the tool. Often, I grab the tool with hand-screw clamps, then I clamp the hand screws in a vise and move things around until I can sharpen the edge.

### Sharpening molding planes

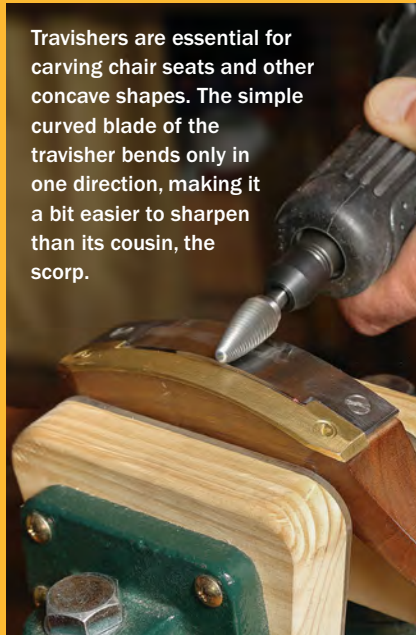
Molding planes cut complex shapes, but maintaining the edge of their irons is straightforward. To keep a beading plane or square ovolo molder working, polish the flat back between each major project and then strop the bevel using dowels either wrapped in fine abrasive or charged with honing compound. This maintains the edge for a good while. After repeated work on the iron's back, the profile of the tool might change slightly. Sight the iron against the plane's sole to look for differences between them. Make adjustments to the iron by working the bevel with a more aggressive abrasive. Then polish the bevel with finer abrasives.

Regrinding a badly mismatched edge to correspond to its sole requires a more involved approach. Larry Williams's video "Sharpening Profiled Hand Tools" (available from Lie-Nielsen Toolworks) is an excellent place to learn that skill.



## Travisher

Travishers are essential for carving chair seats and other concave shapes. The simple curved blade of the travisher bends only in one direction, making it a bit easier to sharpen than its cousin, the scorp.



**A little relief.** You can speed things along a bit if you relieve some material behind the cutting edge on the flat side of the blade using a die grinder. This produces an effect like the hollows on the flat back of a Japanese chisel.



**Rock and roll.** Rock the flat side of the blade along the stone, and move your way up the grits. Remove the burr on the bevel using a dowel wrapped with fine sandpaper or diamond lapping film.

## TIP



**Hand screws are an extra set of hands.** Sometimes a blade, like this travisher blade from Crown Tools, is difficult to hold for sharpening. With the blade held in a hand screw in your bench vise, you can abrade the bevel easily.



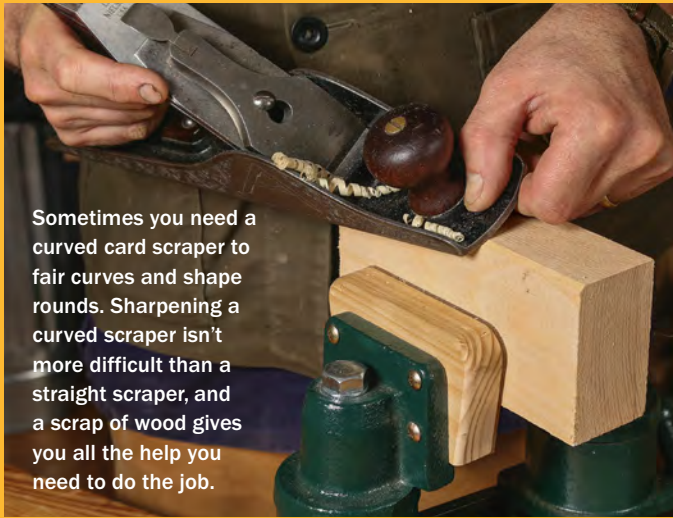
### The compound curves of the scorp

Many tools with curved edges also have curved bevels or curved backs. It's typical of scorps and handmade adzes. As with molding planes, I try to maintain the edge with regular polishing. I don't want the edge to degrade to the point of using a coarse stone or a grinder to bring it back to sharp.

For inside curves, I use abrasives adhered to a dowel. To maintain the edge I use my two finest abrasives (3 micron and ½ micron) to keep the bevel sharp and polished. On the outside curve, I adhere some of the diamond film to a flat stick.

I also have a table-saw method for sharpening the scorp. I use a metal disc-sanding plate for the table saw. I charge the face of the disc that has paper for polishing with polishing compound. I set the plate to the same bevel as the tool, turn on the saw, and lightly pivot and touch the blade to the wheel. Safety note: Empty all sawdust from the saw cabinet beforehand to eliminate the small chance of a fire.

## Curved card scrapers



Sometimes you need a curved card scraper to fair curves and shape rounds. Sharpening a curved scraper isn't more difficult than a straight scraper, and a scrap of wood gives you all the help you need to do the job.

**A simple block.** A squared block of wood, about the same height as the scraper and a bit longer, keeps the scraper 90° to the stone. Plane a small chamfer on the block where the scraper meets the stone to keep debris from affecting the angle. Rock the scraper while holding it against the block.



**Burnish the faces.** After stoning the edge, burnish the flat faces of the scraper to polish the face and draw up the small hook of steel that will become the cutting edge. About 10 strokes on each face is sufficient.



**Turn the burr.** First stroke the scraper's edge with the burnisher parallel to the floor. Then tilt the burnisher about 7° to 10° and slide the burnisher across the scraper's edge, repeating until you can feel a hook with your fingernail. You don't have to create a hook along the entire edge, just in the area you need to do the job.

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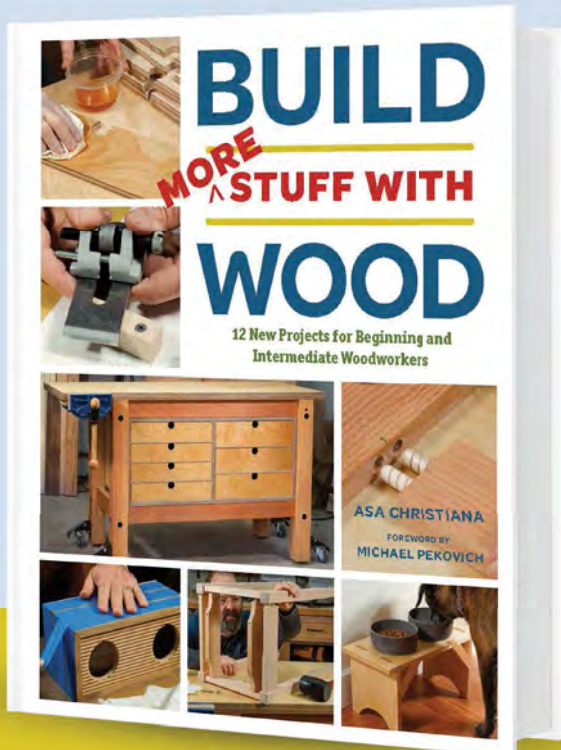
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### Curved scrapers

Card scrapers with a curved or gooseneck profile seem difficult to sharpen. Again, you just need some scraps of wood to get it done. To stone the curved edge of the scraper, place a block of wood on your sharpening stone. The block acts as a fence, holding your scraper at 90°. Move the block around as you work to avoid making a groove in the stone. Cut a small chamfer on the block to prevent wood fibers from getting between the scraper and the stone.

Turning a curved scraper's hook is no different than with a straight scraper. Secure the scraper in a vise and stroke it with a burnisher, slightly tilted. You don't have to create a hook along the entire edge, especially with gooseneck scrapers. Just turn a hook in the area you'll use to do the job. □

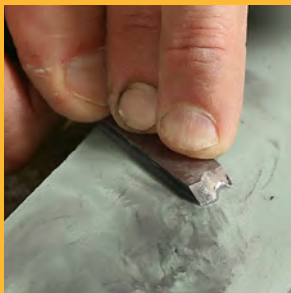
*Christopher Schwarz is a furniture maker and writer in Covington, Ky.*

## Complex shapes of molding planes

Since molding planes are used to make complex shapes, it stands to reason that their blades have unique and complex shapes as well. Dowels are a unique but not complex way of maintaining these blades.



**Tap it out.** A quick tap on the end of your bench will release the blade from the plane.



**Polish the back.** Polishing the flat back of a molding plane regularly keeps it sharp for a long time.



**Strop the bevel with dowels.** Schwarz either uses sharpening stone dowels or wooden dowels wrapped with sandpaper to strop the bevel. Match the diameter of dowel to the curve you're working.



**Site the iron against the sole.** If the iron and sole don't match exactly you can use an aggressive abrasive on the bevel to correct the shape.