Build a Scale-Style Knife George Vondriska Vondriska Woodworks

Instragram: @vondriskawoodworks Facebook: Facebook.com/vondriskawoodworks Knife making can be fun and rewarding. For this project, we'll be using a manufactured knife blank and adding a handle to it. See <u>Sources</u> for knife blank suppliers.

Scale style knives consist of a piece on each side of the knife blank, allowing you to see the steel of the knife between the scales. They can be differentiated from tang style knives. Tang knives consist of a tang, just like on a file, that is contained completely within the handle.

Handle material

Nearly anything can be used for knife handles but hard, close grained materials work better than soft, open grained materials. Walnut, cherry, maple, rosewood, ebony, antler...are all good choices for a knife handle. You can also add accents such as brass, copper, colored epoxy, and more to create color contrasts.

Getting started

Cut the scales so they're the right thickness, 1/4" to 1/2", and larger than required for the knife.



Position the knife on the scales and mark out the hole locations. On dark wood it's handy to use a white charcoal pencil for marking out. See <u>Sources</u>.



Tape the scales together and drill for the pins or rivets. Brass brazing rod works great for pins. Rivets can be purchased from knife suppliers. Though not a must, rivet drills make boring for rivets much easier.

It's best to drill these holes in a drill press, not free hand, to keep them straight.



Insert the pins and lay the knife onto the scales. The scales should still be taped together at this point. Note where the end of the scales should be formed to in order to be correctly positioned on the knife.



Sand the end of the scales so they're even. With the knife engaged on the pins, check the alignment of the scale end on the knife. Continue to sand as needed.



Trace the knife onto the scales. Cut the shape, staying slightly outside the line so the scales are oversized. Note that the scales are still pinned and taped together, and should remain this way while being cut.



Sand the blade end of the scales. It's very difficult to sand these ends after the knife is assembled, so take the time to do a good job on these parts now.



Glue the scales to the knife using two-part epoxy. If you're using tropical wood it's a good idea to wipe the wood with acetone immediately before gluing to remove any oils that could prevent bonding.



Clamp the scales until the epoxy is cured. While the epoxy is still wet, remove any epoxy squeeze out from the blade using acetone. If the epoxy cures on the blade it will be nearly impossible to remove.

Shaping and finishing

There are many ways you can shape a knife handle. Standard shop tools, sanders, files, rasps, and rotary tools, work well. There's no one formula for handle shapes. Look at, and hold, other knives, to see what you like.



A portable belt sander clamped upside down on a bench works great for shaping. Start with an 80-grit belt, and advance grits as you smooth the scales. Use the drum on the front of the belt sander to shape inside curves. Sand the scales flush with the metal.



Rotary tools accept many shapes of cutters. A rotary tool removes material very quickly, but be careful to not allow the cutter to hit the metal, as this will quickly dull the cutter.



Strip sanders are one of the best tools for shaping knife handles. Notice that the platen has been removed. This allows the belt to bow around the handle, allowing you more options for shaping. Belts are available from very coarse to very fine.



Inflatable sanders work GREAT for shaping knife handles. With lots of pressure in the pneumatic drum it's very firm. With limited air in the sander it will wrap around the knife handle, allowing you to round corners.

Flutter sanders, also called sanding mops, work well for final shaping and sanding.



Apply the finish of your choice.

Sources

Blades, rivets, rivet drills, pins, mosaic pins, sheaths, bolsters, pommels and more.

Knife making supplies

Jantz Supply www.knifemaking.com

USA Knife Maker <u>www.usaknifemaker.com</u>

General supplies

1/8" brass brazing rod

Powertec 1" x 30" sander, with 5" disc

Triton 3" x 21" belt sander

4" sanding mop 120-grit

Inflatable sander

Two-part epoxy

Makita die grinder

Turtlewax polishing compound

4" buffing wheel

Bessey vise pads

Wood rasp

Silver solder and flux

