

In the first issue of *Metalsmith Tech*, you'll find Jim Bové's fantastic guide to teaching cuttlefish casting in schools. While Jim's piece talks about the whole process, the additional images and notes below illustrate specific steps in greater detail.

More information on Jim Bové can be found at <http://jimbove.com>.



Use a figure-eight or X pattern to ensure that the cuttlebone is evenly sanded. Coarse sandpaper (such as 180-grit wood) works especially well.



Designs can be drawn directly onto the cuttlebone using pencil, as in the above image.



This image shows some of the tools that can be used for carving and pressing into a cuttlebone to create designs. Soft brushes are used to accentuate the natural cuttlebone texture. Careful carving with a polished tool can produce very smooth textures.



This piece was cast in pewter, so the mold can be used for another casting.



Melting the metal for casting is a crucial step. It is better to melt a little more metal than you'll need and just stop pouring once the mold is filled, rather than run out mid-pour. No matter what metal you choose to use, make sure it's fully melted; the metal should "pillow," or have good surface tension and no resistance when a stirring rod is passed through.



The best way to remove sprues from a silver and bronze cast is to use a jeweler's saw. A #4 saw blade is a great all-around blade for cutting off sprues.

Tips for sawing:

- Always have the blade teeth facing out (away from the frame) and facing down (toward the handle).
- Make sure the blade is under tension. A loose blade will break more easily.
- Use a bench pin.
- Keep the blade straight up and down.
- Let the blade do the work.



For removing sprues from a pewter cast, a good flush cutter works well. Flashing and any vents that may have been cast can also be removed with the flush cutters.



File away the marks created by sawing off sprues and flashing. Files can be used to further shape the work.

Tips for filing.

- Files cut in the forward or push direction.
- Use file handles.
- Make sure the artwork is well supported.
- Use the largest file practical for the job.
- Decent files can be found at hardware stores if your school is on a budget.



Sanding

We filed to remove the marks left by sawing and to shape the artwork. Sanding will now remove the file marks and small irregularities in the surface.



Tips for sanding.

- Start with a coarse grit sandpaper and progress toward finer and finer grits.
- Make a sanding stick by gluing or taping sandpaper to a block of wood or paint stirrer.
- Sandpaper can be folded over to make it more rigid and used with fingers as a backing. Just remember that fingers do not provide the same push and, because fingers are soft, the sandpaper may follow a high spot rather than remove it.
- As a student I worked for a Boeing subcontractor sanding airplane wing panels (yes, they are all hand-sanded) and we were required to use a sanding block. It was not an option!



A good general patina to use on sterling silver and bronze is liver of sulfur. For pewter there are a few commercially available patinas like Novacan Black and Jax. Be sure to wear gloves and eye protection when applying patinas.