

# CUTTLEBONE CASTING

Complete a cast from start to finish  
in less than an hour

DEMO BY

KAREN J. LAUSENG

Project photo: KAREN J. LAUSENG

I absolutely love the spontaneity of cuttlebone casting.

There are many ways to create a mold, but the direct method of carving directly into the bone is a simple, low tech process. You'll be able complete a cast in less than an hour and have a unique element to inspire your next design.

## SKILLS YOU NEED

- casting experience
- torch use
- carving

## MATERIALS AND TOOLS YOU NEED

### MATERIALS

Cuttlefish bone

Sterling silver scraps

Powdered casting flux

### TOOLS

Concrete block

Carving and marking tools: pencil, dental tools, paint can opener, awl, square tubing, round tubing, etc.

Wire cutters

Soft brush

Masking tape

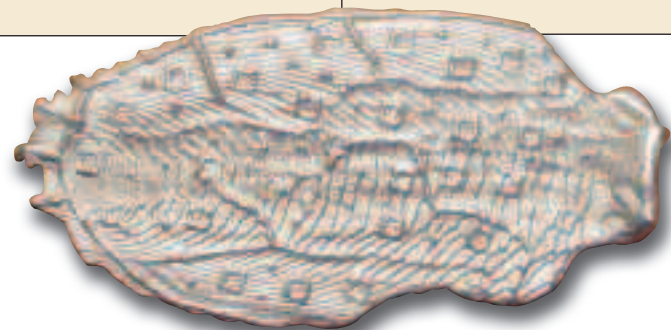
Acetylene torch with a large and medium tip

Fireproof surface with adequate ventilation

Fireproof brick

Respirator

Crucible



## TRY IT YOURSELF



Use your casting to make a pendant

CAST SILVER PENDANT

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**{Photo 1}** Large cuttlebones can be purchased from jewelry suppliers, small from pet stores.

**{Photo 2}** To prepare mold for casting, divide cuttlefish bone in half by carving straight line with awl. Determine centerline and score. Make several passes into line with awl until groove cuts completely



through soft side of bone and you can feel scraping against hard shell.

Next, break shell by snapping along score line; should break evenly in two.

**{Photo 3}** Rub each half with soft surface down on concrete block in circular motion. Any rough, flat surface will work – e.g., flat



concrete sidewalk or driveway. Hold bone firmly and apply a light, even pressure as you rub. Continue to remove material until each half has flat, smooth plane. If outer shell begins to scrape on concrete, carefully clip that area of shell with small wire cutter.



CHOKER  
Sterling silver cuttlebone cast.  
Photo: Caitlin McNamara.

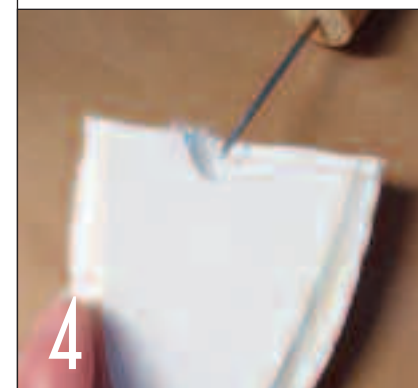
CUFF RINGS  
Sterling silver cuttlebone cast.  
Photo: Caitlin McNamara.



## CUTTLEBONE FANS SAY:

“We are enamored with the texture of the cuttlefish casting, as well as its long history in jewelry making. Take the time to ensure the mold is tight – flush fronts to meet up cleanly and file notches in the sides to wire-wrap the two parts together – avoiding shifting of the mold.”

Amy Holiday and Amy Steljes,  
Evidence Design, Seattle, WA



**{Photo 4}** Using awl, carve a sprue into each half of mold, leaving opening 1/8 width of upper surface. From top to bottom, carving should measure less than 1" long.

**{Photo 5}** Carve shape into cuttlebone, being careful not to carve too deeply. Carve



only into one side of mold, leaving remaining section flat, except for sprue opening. **TIP** Add texture as you like now. I gently pushed square tubing into bone to create squares on my casting.



**{Photo 6}** Once pattern is carved, add three or four carved vent lines to bottom of carving with pencil – they should be deeper at edge of design and fade to a faint line at mold base. Add a shallow groove around outer edge of carving to provide path for molten metal.

## CUTTLEBONE FANS SAY:

“My favorite thing about casting in cuttlebone is the spontaneity of the process. Much of the time, the casting will look different than expected and that is the beauty of it. The process is relatively simple and low tech, and the time involved is minimal. It is really fun to open the casting and see how it turned out.”

Karen J. Lauseng,  
Silver City, NM

**BROOCH**  
1½" x ¾" x ⅛". Sterling,  
rail road nail, 14K gold.  
Photos: Jim Lawson



**EARRINGS**  
Sterling, woven,  
multicolored  
paper quilling  
strips, cultured  
pearls, 14K gold  
posts.

## CUTTLEBONE FANS SAY:

“With cuttlebone, the natural texture is what makes the finished castings so unique – but let’s not leave out the immediacy of the process and the ease of use. To be able to use this very old technique as a modern jeweler puts one in touch with the past in a way that is thrilling to me.”

Carl Stanley, Santa Barbara, CA



**PENDANTS**  
Cuttlebone cast sterling  
with bezel cap soldered  
in place and set with  
turquoise. The cuttlebone  
was carved and stamped  
prior to casting.



Photos: Patrick Flannery



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**{Photo 7}** After carving is complete, use soft brush to remove dust and loose material. For a well-defined casting, firmly brush both sides of mold to ensure it is clean and dust-free.



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**{Photo 8}** Hold both sections of cuttlefish mold together and firmly secure halves with masking tape. Make sure tape tightly holds bones together with no gaps or spaces where molten metal could escape.



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**{Photo 9}** Secure mold firmly in a place where it will not tip. Whatever holding method you choose must be secure, fireproof, and placed on a fireproof surface. Proper ventilation is essential.

A coffee can filled with sand works best for me. Other options include placing the mold between two bricks, burying it halfway in an annealing pan filled with pumice, or held in place with a third hand apparatus.

### CASTING TIPS

- Small pieces of sterling left over from other projects, including old sterling chains, rings, etc., make fine scrap; otherwise, casting grain can be purchased from a jewelry supplier.
- For carving, you'll need something with a flat edge. A paint can opener has a nice flat surface, which makes it easier to achieve an even depth. Do not carve too deeply or the casting will be very thick and difficult to use. Try to keep the carved depth less than ⅛" – about the same as an 18-gauge piece of sheet metal.
- A pencil works great as a carving tool. Carving random lines into the bone will create an interesting texture. You could also press the pencil into the surface to achieve dots. Round tubing makes nice circles and with the end of a paintbrush you can make larger dots. Old dental tools work great, too – use what you have available.



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### BE SAFE!

Wear a respirator! The dust from the cuttlefish shell is extremely hazardous for your lungs – wear a respirator to filter out dust and other toxins, and sweep up and remove the dust from the studio when you are finished carving.

Ventilate! When casting, proper ventilation is necessary to remove the fumes emitted from the flux, torch, and burning bone. Cuttlefish casting has a distinct, strong, fishy odor – you'll definitely want to ventilate.



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**{Photo 10}** Preheat the crucible until slight glow appears and carefully add metal.

Try using scrap sterling leftovers from other projects. If you don't have any scraps, you can purchase casting grain from a jewelry supply company.

Once metal is molten, add small amount of flux with steel tool. For a small casting, less than ¼ teaspoon is sufficient. Flux helps keep metal clean and aids flow as it is poured into mold.

**{Photo 11}** Ensure that pouring edge of crucible is red hot, so metal doesn't cool before entering mold. Pour molten metal into mold, being very careful not to get fire too close to casting. Be sure to keep torch



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aimed at crucible until all metal has been poured. The smell will be quite unpleasant – you will be thankful for proper ventilation.

**{Photo 12}** When cool, remove masking tape from piece to reveal casting. Dispose of mold and clean silver with dishwashing detergent and brass brush.

The final casting is now ready to be used in your jewelry design.

**KAREN J. LAUSENG** is an accomplished New Mexico metalsmith residing in Silver City. Her artwork has been showcased in numerous national publications and exhibited in more than 100 shows. See more of her work at [www.kjartworks.net](http://www.kjartworks.net).

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