

Egging for newcomers

Guest editor Kurt Hertzog introduces eggshells into his decorative turning

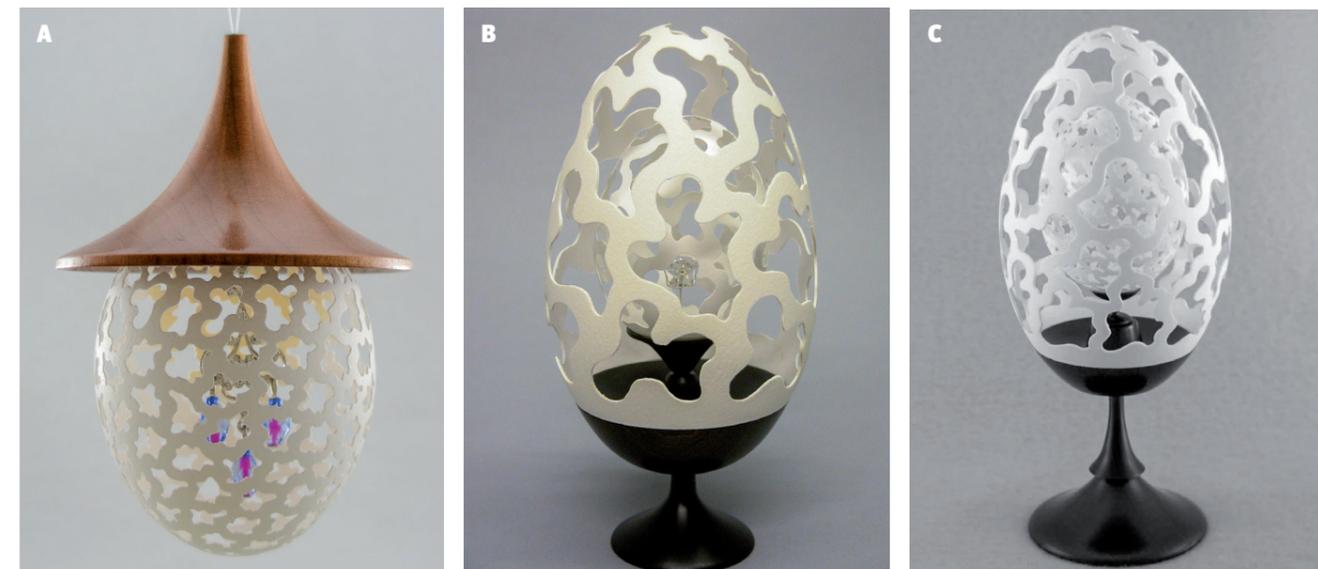
Among the items that most woodturners create are ornaments. The typical time to create them is later in the year as the holidays approach. The problem that seems to occur is that, by the time most of us get started with something new, there is too little time to venture into the territory. Not expecting to be all-inclusive this go around, my goal is to share sufficient information that newcomers have time to explore using eggshells as part of their turning projects.

Shells, shells, everywhere

There are many types of and sources for shells that can be incorporated into turning projects – especially holiday ornaments, whether sitting, standing, or hanging. Many seashells come to mind with sea urchin shells being popular. While they work superbly, my focus here will be the sources, tools, and techniques to work with eggshells. The eggshells that I'll cover are chicken and goose. There are others, but understanding how to work with either of these will guide the path for any other shells of the same type. There are sources for these types of eggshells in craft supply retailers as well as from other providers. I buy all my chicken eggs in the local supermarkets and clean them myself. My source for goose eggs is online retailers. These breeders are providing geese to the restaurant trade and have a side market among artists selling emptied and cleaned goose eggshells from those that didn't hatch. Goose eggs prepped and sold in the art trade are sold by circumference – the largest number on the largest dimension, dictates the price. The larger the egg, the larger the price. I am certainly not an animal specialist, but I'm told that availability of the goose eggs, especially the larger ones, is based on their breeding season. Once the larger ones are gone, they are gone until the next season. Regardless of the sizes you order, they come nested in corrugated cardboard separators along with shredded newsprint. In all the years I've been buying these for myself and my ornaments classes, I've only had one broken goose egg. That was so far down in the bundle that I believe it was flawed from the start, since no impact or vibration could have reached that one eggshell and broken it.

Cleaning and drying chicken eggshells

Depending on your background, including any time you may have spent on a farm, you may know about harvesting eggs from the hen house, the different colours of shells, and ways to clean them. Among the various methods that I learned – not from growing up on a farm – most involve putting a hole in the top and bottom of the shell. Once that is done, there are a batch of different air devices to expel the contents. Because I want my eggshells with only one hole, rather than two, and the smallest it can be, I needed to concoct a method to do this. The method I've settled on works well for me and I've gotten in the habit of cleaning dozens of eggshells at a time. Once I'm set up, I may as well take advantage of that sunk effort to get dozens done before tearing things down. To remove the contents of the egg through the smallest hole possible, I need to have the eggs warm. Before I drain them, I let them come to room temperature. The egg will be drained into the sink with nobody eating the food. Letting the eggs get warm simply helps make the contents more fluid after I break the yolk. The eggs are marked as best I can for centre of the top. A small hole is cut using my high-speed air tool. With access through the hole, I break the yolk with a toothpick to allow it to pass through the small hole. Inverting the egg and injecting air into it, the insides are expelled. The empty eggshell is then filled with warm water and that is removed. The eggshell is allowed to drain and dry using a bed of nails that supports it inverted through the hole in the top.



A Sometimes simplicity is elegant enough. Here a pierced chicken egg with a plain cherry roof is home to a candelabra earring **B** How about a diamond (faux) stick pin inside a pierced chicken egg inside a pierced goose egg atop a blackwood base? **C** Simpler yet – a pierced chicken egg inside of a pierced goose egg on a blackwood stand **D** What you can include inside your pierced work is virtually limitless. Here a small crystal light sits atop a post inside the eggshell **E** One of my holiday ornaments from years back. The Hessian soldier inside the ornament hangs there and is removable to interchange with the little drummer boy **F** I never get tired of making this type of eggshell ornament. Here a pierced, dyed and painted goose egg with a long, graceful blackwood finial **G** The result of some of the experimentation with the automotive candy colours. Pierced and painted goose eggs on blackwood bases along with some feather decoration **H** The fun with ornaments of this type is the presentation method. Here, the ornament is presented on a painted, steam-bent cherry stand skewered with an African porcupine quill **I** Suppose you want a birdie inside your pierced eggshell birdhouse ornament? Not only do we want the birdie in the birdhouse ornament, but he needs to appear to be flying **J** Here is my method for suspending the birdie in space with no apparent, or hardly visible, means of support.



PHOTOGRAPHY BY KURT HERTZOG

Decorating the canvas

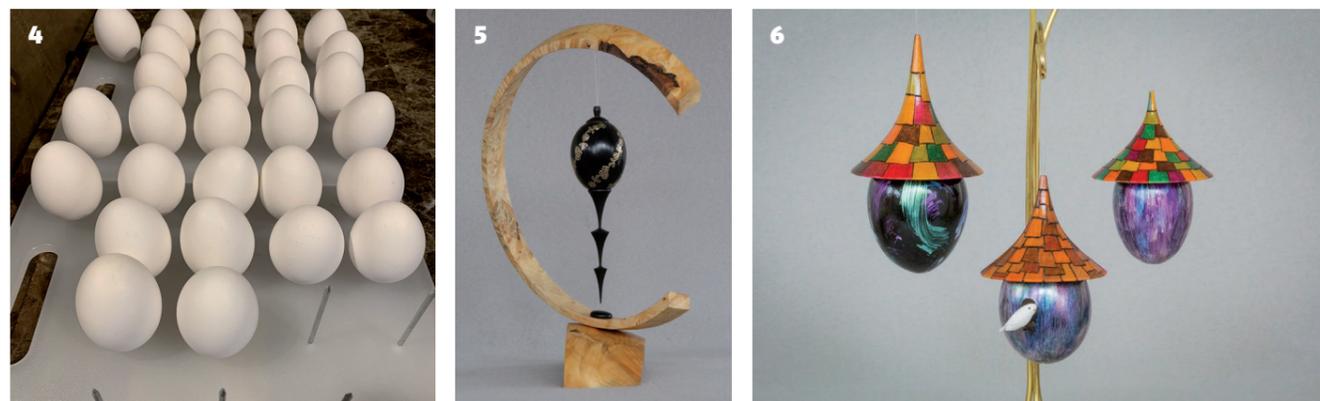
With either the chicken or goose eggshell, you now have a blank canvas to decorate. The shells can be dyed or painted in any design or colour you wish. How ornate would you like to make it? Totally up to you. The eggshell can become a Fabergé-type ornament if you wish, or the shell can become the body of your ornament by attaching an upper and lower finial. Regardless of your artistic bent, an eggshell is an ideal canvas. The shape itself, while each is like a snowflake with all looking alike yet totally unique, is pleasing as is. Lightweight and incredibly strong except for impact. I do use 'solid' eggshells for some of my ornaments, but the bulk of them are further altered by piercing.

Why piercing?

In my opinion, a solid eggshell has great form but still needs some additional modifications to make it more eye-catching. The process I use for piercing is quite simple. I usually decide the locations and size of the finials. The areas where the finials will attach are left unpierced to provide maximum strength. Often, I will take a pencil and mark these areas or use some blue painter's tape to indicate areas to leave unpierced. I'm often questioned about methods to reinforce the eggshell and how many I break in the process of piercing. I haven't found a need to reinforce the eggshells since they are quite strong. I use the eggshells as part of my ornaments because of their size-to-weight characteristics. Adding anything to increase the strength



1 Getting into using eggs can be as easy as a trip to the supermarket. Different sizes and colours can make things very interesting **2** My process is to warm up the eggs, pierce a hole in the centre of the top of the shell, and break the yolk. The insides are now removable through a relatively small hole **3** Injecting air into the inverted shell will blow out the contents. Rinsing with water or bleach cleans the inside. That is ejected using the same method.



4 Any stains on the shell will impact the results, whether painting or dyeing. I 'drip dry' my freshly washed shells on a homemade bed of nails **5** Emptied and cleaned eggs are easily painted to any colour. Craft store appliques and a couple of finials make a quick and easy ornament **6** Eggshells lend themselves to a variety of ornament designs. One of my favourites is the proverbial birdhouse with a colourful thatched roof.



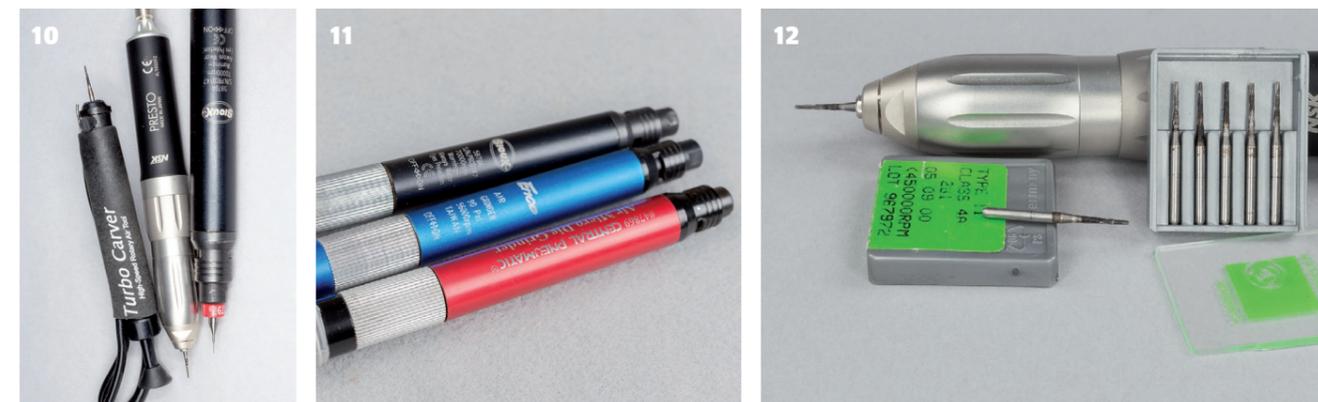
7 One of the things I like the most about eggshells is the pleasing shape and their ultra-light weight – they lend themselves to dainty creations **8** Even with dust extraction, I always wear a dust mask unless I'm outdoors with a breeze. Eggshell dust should be treated like wood dust – use proper PPE **9** Eggshells, pierced or not, can be easily painted by airbrush, rattle cans, and even with brushes.

simply adds weight. They do require reasonable handling, both during the piercing process and afterwards, but reinforcing isn't required. I haven't had any problem with breakage while handling and piercing. I have had breakage with impact moving them around or storing them afterwards. The breakage of the eggshells and ornaments is always after the fact, with inexperienced people handling them or accidental breakage while being dusted or moved by others.

Piercing eggshells

As noted, careful handling of the eggshells during piercing is required but isn't really the critical issue. The most critical part of the process is the actual piercing action. To pierce the eggshell and impart your

desired 'hole or absent' piece requires a light touch and a high-speed cutting tool. My tool of choice is the NSK Presto handpiece. This dental technician's tool is ideal in my opinion. It accepts all the 1/16in burs from the huge assortment of the dental and craft burs available in the marketplace. Running at up to 400,000rpm, depending on supplied air pressure, the carbide burs I use pierce through the shell like it's butter. There are a few tricks on presenting the bur to the eggshell and the direction of cutting after piercing but they are simple and rote with some experience. Can you use the Dremel, Foredom, or other rotary tools? Perhaps, but in my experience, unless you are running the bur at the super-high rpm, you need to put too much pressure on the cutter. That pressure to break through the surface

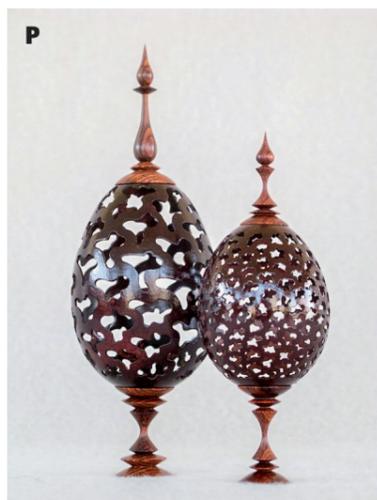
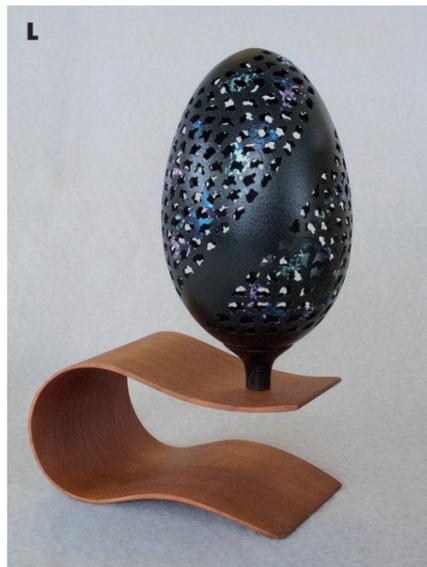


10 Piercing eggshells works best with ultra high-speed rotary tools. My eggers are the TurboCarver and the NSK Presto. The lower-speed die grinder has more torque for wood **11** Not all die grinders are equal in performance and rpm. The good, better, and best in my die grinder kit **12** If you get into high-speed piercing, be certain your carbide burs are rated for that speed. Notice the rpm rating on the burs is up to 450,000rpm.



13 A key to good piercing is stability. Plenty of light, a comfortable chair, PPE, and elbows being well supported.

16 The beauty of a die grinder is working with thicker woods and the ability to colour the inside of the pierced holes with a slight burn **17** Painting in process. Experimenting with some automotive candy colours in the workshop of the late Giles Gilson.



K Another diamond stick pin example. A pin inside the goose egg on a cherry stand. The ornament is removeable, interchangeable with others on the same diameter base **L** Another look at the same stand with a different goose egg **M** Another of the fun display ideas. A steam-bent cherry stand with a simple pierced and painted chicken egg ornament **N** A painted steam-bent cherry stand created to display a painted chicken egg ornament with a plain cherry roof **O** Breakage doesn't occur during piercing but rather when things are laying around or being moved after completion. Here, some work in process to get ahead of the game **P** One of the few times I turned finials from species other than blackwood. In my opinion, nothing really turns, polishes, and holds detail like African blackwood **Q** Another fun display stand. A steam-bent and glued-up maple stand to display a pierced and painted eggshell ornament **R** One of the biggest challenges is making a perch that will bond well, strong and correctly angled, in the wall thickness of a chicken egg. Doable but tricky **S** Perhaps not the cleverest idea ever executed but certainly a bit of a unique eggshell holiday ornament **T** Of course, pierced shell ornaments lend themselves to having an internal light. One of many that are lit with an internal lamp that changes colour **U** An experiment in the porosity of the eggshell. A pierced goose egg with alcohol dyes bleeding into the pores of the shell on an African Blackwood base **V** My favourite lidded box done with a pierced and painted goose egg with African blackwood finial and base **W** An AAW fundraising donation from years back. My mixed bag of pierced and painted eggshells in a bowl created by Chris Pytlik.

creates a lot of breakage. You are certainly welcome to try it. I hope you are more successful than I ever was. Don't forget protection for your eyes and wear a proper dust mask.

Creating ornaments using eggshells

Now you have some great-shaped bodies that can be used to create ornaments. Do you want decorated or pierced eggshells to sit in a bowl? Perhaps a hanging ornament with upper and lower finials? The endpoint is limited only by your imagination. Illustrating and explaining my methods is beyond the scope of this introduction article. I'll try to provide some additional information in the examples and captions. Suffice to say that you can experiment on

your own for very modest cost, except the high-speed handpiece, with a few bucks for eggs at the supermarket.

About handpieces and burs

There are several makers of high-speed rotary handpieces that I use. My staple is the NSK, but I have also had great luck with other manufacturers. I have a handpiece that I bought nearly 20 years ago that was super-light and modestly priced. The body was made from a reinforced nylon moulded around the turbine mechanism. I still have it and it works nicely but it isn't my favourite since acquiring my NSK turbines. One concern that I share with my students when they are using these tools is the concept of safety. The bur is small

and relatively smooth to the touch. The problem is that, when it is running at 400,000rpm, it will cut through anything in its path. It will melt through your parts just as easily. Also, it takes a moment for the bur to spin down. Until that happens, poor handling is not only hazardous but destructive. Having said how fast it runs, I only used dental-grade burs that are tested at speeds higher than that. They cost a bit more but if I'm going to have my hands and face anywhere near something running that fast, I don't want the bur to be one from the discount hardware store. You can also pierce wood and other materials with this gear. Proper changes in piercing and cutting techniques are needed because of the minimal torque available and possible burning material smoke/fumes.

Where next?

As an introduction to 'egging', you've now got more than sufficient knowledge to be making anything from awesome Easter eggs to exotic art piece ornaments. Dyeing, painting, piercing, and other decorative techniques can be used to create totally unique pieces.

In the future, we'll dive further into the tools, equipment process, and tips and tricks of working with eggshells, especially pierced shells. I've included many examples of things I've done over the years as thought starters for you. The beauty of shells is they will never change shape, decay, or degrade. Almost the perfect material. Go and experiment.