

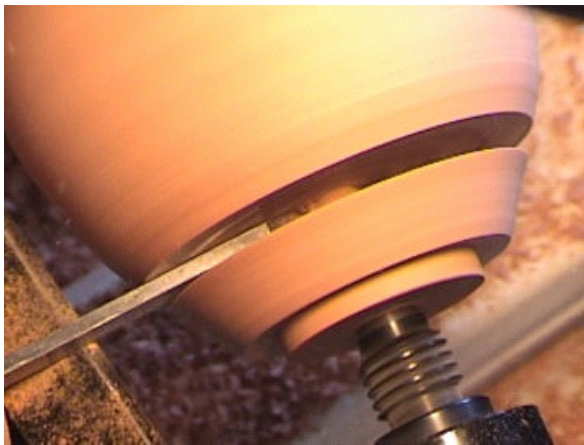
Turning a Winged Hollow Form

featuring Bruce Bell

Our April demonstrator was Bruce Bell, one of the foremost woodturners in Australia. Bruce was a featured demonstrator at the recent Turning Southern Style VII Symposium in Gainesville and his travel schedule fortunately permitted him to participate our meeting. We are also grateful that Jim Duxbury, who was originally scheduled to demonstrate at the April meeting, agreed to reschedule his travel to May.



Bruce Bell began turning in 1973. He often refers to timber as "Nature's Hidden Secrets." He strives to produce simple eye appealing forms from Australian native timbers, using only the best that nature has to offer. He says "The challenge for woodturning is not unlike working with precious gems: the beauty is within the tree, and it is a challenge to be able to show it off to its best advantage".



Bruce chose to demonstrate two different turning techniques at our meeting. The first was his method for turning a hollow form through reverse chucking and the second was illustrating how to turn a winged hollow form.

At the onset he emphasized that from his perspective the wall thickness for a hollow form vessel was not a significant consideration because this property can never be observed. He produces thin walled vessels only as a means of reducing the weight of the finished object when turned from very dense wood.

When turning a standard hollow vessel for which the opening on the top will be a half inch diameter hole, he first turns the initial block of wood between centers to the desired approximate exterior shape. In the process he turns tenons on both ends of the block for use in later chucking. He uses a skew chisel as a scraper for this purpose. He then parts off from the end chosen for the base a section about one inch in thickness. He noted that a parting tool can be made to much more cleanly cut end grain if the cutting edge is ground slightly concave



by touching the center of this edge against the corner of the grinding wheel as the final sharpening step.

Next he mounts the tenon of the top portion in the chuck and drills a one and a half inch hole in the bottom to a depth just below where the neck of the vessel will begin. He then hollows the block through this hole by using a straight shank scraper with a replaceable tungsten carbide cutting wheel on the end. He stressed the importance of holding the tool so that the cutting wheel was at about 45 degrees to the wood surface being cut and shank was parallel to the axis of rotation. It is important when hollowing to regularly clean the waste wood from the interior of the vessel to prevent this debris from fouling the cutting edge of the scraper.



When the hollowing is completed, he turns a recess mortise in the hole in the bottom with a skew and smooths the bottom face outward from this recess so it is slightly concave inward. These actions will permit him to tightly glue the base section, which he had parted off earlier, onto the bottom of the vessel after an appropriate size tenon has been turned on this piece. He glues the base onto the hollowed shell using CA glue and accelerator and the tail stock live center to apply clamping pressure. This completes the reverse chucking process.

The next step is to drill a ½ inch hole in the top of the block. This process will indicate how much solid wood remains at the top as well as providing a point of reference for final shaping of the top. With the hole drilled he uses a cone center to hold the piece firmly in the tail stock. As a final step he turns the outside surface to the desired shape using a gouge and then the skew as a scraper for smoothing. He states that he prefers simpler, free flowing shapes that accentuate the color and grain of the wood rather than turnings with “many lumps, bumps and crannies”. He does suggest using a texturing tool to mask cracks or blemishes that may occur in the surface. He sands the surface smooth using a power sander and then parts the vessel from the chucked base to finish the project.

To turn a winged hollow form he begins with a log about 4 inches in diameter that has been sawed lengthwise on a band saw. He chooses the length to meet the swing capacity of the lathe. On the bark side he drills a hole just large enough to accommodate a chuck with spigot or step jaws. This side of the log will ultimately be the top of the winged hollow form and the flat side the base. With the piece securely mounted in the spigot jaws he begins by turning the base into an “S” shape profile. The outer curve of the





shape will be the feet on which the bowl ultimately rests. The inner curve forms a hemispherical central base that mates with the hollow vessel to be turned on the top side. He turns a tenon on this base which will be used to hold the piece when it is reversed for turning the upper surface of the bowl. When turning this shape it is very important to roll the gouge to almost a vertical position when approaching a change in curvature to prevent the lower cutting edge from catching.

When he is satisfied with the shape of the base he reverses the piece and turns the top side. He uses a gouge for this purpose and is very careful to follow the bevel. He rough turns the top shape to conform to the base profile. The central bowl portion is turned to blend smoothly with the rounded base below. When the desired shape and wing thickness has been achieved, he drills the hole in the center, used initially to hold the spigot jaws, deeper into the base to the depth desired for the resultant hollow vessel. He then hollows the central portion with the same straight shank hollowing tool that he used in the first demonstration. The final step in this turning is to reverse mount the piece once again to finish the base using the spigot jaws in hollow center. The resulting bowl rests on its wings when placed on a flat surface.

