# Woodcarving By NUMBERS

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## Series 1. Episode 12 - Patera with Mike Davies

Paterae (circular ornaments) are a popular form of decoration with a multitude of uses. They stem from classical architecture and were later used to decorate furniture. Paterae can be used as decorations set into the tops of table or chair legs, or into the frieze of a fireplace, for example. A patera can be used to decorate the lid of a turned bowl or even carved as a small aift.

I chose Walnut for the paterae I've made for the lead pic (Photo.1), but any carving timber will do. If you Google 'Architectural Patera (or Paterae)', you will find a wide selection of shapes, sizes and designs. Once you have mastered the pattern in this issue, you can have a go at others or design your own. This project will put your skill in the Significant Six Techniques to the test. Each of the techniques can be viewed online by searching 'Record Power Significant Six Techniques with Mike Davies', or by viewing the link below.



To view the Significant Six Carving Techniques video online visit

www.recordpower.co.uk/category/carving/v/26



Photo 1: Six Walnut paterae in differing degrees of completion

#### **PREPARATION**

Cut out a carving blank that is 65mm in diameter and 15mm thick. I would suggest cutting four or five blanks so that you have a few in reserve if you make a mistake (Photo.3). You will need to secure the timber blank to a board which can be clamped to the work surface while you carve. Ensure that the bottom face of the carving blank is clean and perfectly flat. Key the surface by scoring it with a marking knife to create a shallow chequered pattern. Lightly rub a candle over the surface to apply a thin layer of wax before gluing and cramping the blank to a board.



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Fig. 1: Tool profiles used in this series



Photo 2: Cutting a circular blank on a scrollsaw

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**Photo.3:** Gluing the blank to a board after scoring the back and applying some candle wax.



Photo.4: Thinning the edges with tool #12

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Photo.5: Refining the dome with tool #6

The score marks allow the glue to form a strong bond while the wax provides a barrier between the two surfaces, enabling you to release the carving easily on completion (Photo.3).

You can use any sort of woodworking glue. PVA is ideal, but if you wish to start working on your carving immediately, you could use a quick set glue. When the adhesive has cured, the blank should be secured enough to allow you to carve. On completion of the carving, the blank can be removed by working the blade of a thin pallet knife underneath the carving, concentrating on freeing the outer edges before moving to the centre. After a little persuasion, the carving should lift quite easily, leaving a clean surface to use as the base of the carving.

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It is possible to use paper instead of the wax. However, this may result in a weaker joint and the back may require more cleaning up. If you do choose to use paper, apply glue to both sides before placing it between the carving blank and the board. For this project it will be important to ensure that the grain of the blank is horizontal when the board is fitted to the bench.

### CARVING

Use chisel #12 to start to shape the blank, leaving the edge square and approximately 4mm deep (Photo.4). Form the dome with tool #6, holding it in the Fist position and using the tapping technique (Photo.5).

This project is perfect for helping you to understand the cutting directions required when working with timber and to practise holding the carving tool in the left hand to carve to the left of the bench and vice-versa for the right (Significant Six Techniques).

Remove any imperfections in the dome shape with sandpaper. As an alternative to carving the blank to this stage, you may wish to use a lathe for the initial shaping, if you have access to one. Use tool #4 to set in a circle in the centre of the dome. Use the profile of the carving tool to shape the circle, which should be approx. 13-15mm in diameter. With tool #12, carve away the surrounding timber from around the central circle to form a dish shape approx. 25 millimetres in diameter.

Carve down to a depth of roughly 6mm. Leave the inner circle untouched at this stage. Ensure that the sides are vertical and that the circle's perimeter does not become smaller as you carve deeper. To form the petals, mark 8 divisions around the circumference of the flower with dividers and draw straight lines through the centre of the disc to link each of the marks (Photo.6). Divide each section equally. This will give you 16 evenly spaced divisions, 8 of which are linked by lines (**Photo.6**).

Round over the centre button with tool #4. You may need to deepen the dish shape a little deeper with tool #12. Try the tapping technique and remember to use the right-hand to carve to the right hand of the bench and vice versa for the left (Photo.7).

Drill a series of 2mm dia. holes to form the eyelets of the flower. Try running the drill in reverse to prevent the drill bit tearing out any timber on the surface. Alternatively, try filing the end of a nail to form a smooth dome. When used in the drill as a 'drill bit', the resulting hole will be polished and have a smooth base.

Each hole should be located on your long dividing lines exactly 15mm from the centre **(Photo.7)**. Form the petals using tool #12 by

setting in shallow cuts, linking the short marks to the longer lines. In Photo.8 you can see how tool #12 has been used to remove small sections of timber from either side of the pencil lines which mark out each petal. Note how a high central ridge has been formed in between each petal, and how the cuts are clean as they define each of the petal shapes. Extend the drill holes into teardrop shapes with tool #1.



**Photo.6:** Carving the central dish shape and marking the eight divisions for the petals.

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**Photo.7:** Rounding over the centre button and outling the petals.



Photo.8: Forming the petals.

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**Photo.9:** Using a home made punch to refine the teardrop shape at the base of each petal.



#### Photo.10:

Forming the V-shape in each large petal.

Point the teardrops down towards the petals using a punch to define the shape further. To make a shaped punch, simply gather a collection of nails or metal bar and file the required shapes into the end. These are especially helpful for occasions when you are unable to remove fine splinters of wood from tiny crevices. The punch is used to define the shape, compress the splinters and form a clean area with a flat base **(Photo.9)**.

Cut a shallow dividing line down the middle of each petal using tool #1. Make sure this line radiates accurately from the centre of the flower (Photo.9).

Use tool #12 to cut from the perimeter of each petal down towards the centre line, forming a V-shape with rounded sides. As you work, gradually deepen the centre cuts with tool #1 (Photo.10).

Use tool #4 to shape the tips of the small petals, which are located between the larger ones. Trim the outside edge of each small petal, from the central ridge down towards the larger petals in an arc shape on both sides, creating a pointed tip.

Complete this shaping process with a number of small cuts to avoid splitting the larger petals **(Photo.11)**.

With tool #5, round the shoulders over the eyelets, down towards the centre cut lines on the larger



Photo.11: Shaping the tips of the small petals.

petals. Continue to deepen the central line on each petal with controlled cuts. Try to achieve a consistent depth for each petal **(Photo.12)**.

Use a palette knife to gently slide underneath the completed flower, freeing the edges first (Photo.13). After releasing the flower, scrape the base with a flat chisel to remove any remaining traces of glue or wax. Remove any tiny splinters of timber from the back of carving using tool #1. This process is referred to as 'backing off'. Certain relief carvings and in particular three-dimensional carvings, often require all surplus timber to be removed. This process is carried out by placing the carving upside down on an old cushion or similar material so as not to damage the surface details.

Hold the carving securely with one hand and using carving tool #1, carefully remove any surplus timber that was not previously accessible. Remember to always cut away from the hand holding the carving, and only remove tiny slivers of timber at a time with a minimum of force. If done incorrectly (ie. working towards the hand or using force), this process can be hazardous, so make sure that you are in control of the carving tool at all times.

The general idea is to remove excess timber without making the carving too weak. In **Photo.14** you can see how only the very tips of the carving have been reduced to a fine point. The bulk of the remaining timber is out of sight and does not require removal. Your first patera is now complete.



Photo.12: Refining the surrounds of the eyelets.



**Photo.13:** Removing the patera from the backing board.



**Photo.14:** Reducing the back of the tips to a fine point with chisel #1



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Photo.15: The completed patera

For more information on the Record Power Carving Tool Set, visit the Record Power website, or view the video shown in the link below.

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To View a trailer of the DVD online visit www.recordpower.co.uk/category/ carving/v/24

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