

# Wormy maple side table

Something's really bugging **Michael T Collins**. He's treating us to a worm-eaten side table project – very tasty...

**A**s a woodworker and very avid 'upcycler', I am always loath to see wood go to waste. So, when a friend said they had some 'wormy' maple they couldn't use, I just had to have it. Instantly, I knew that I wanted to make something with it that would show off the worm holes, creating a beautifully organic effect in the piece.

## Tenons

Prepare all parts to final dimension. Legs can be left 25mm longer; this extra wood, called 'horns', located at the mortise end of the legs, will prevent 'blow out' when chopping the mortises.

**1** Start by marking the tenon's depth, based on the mortise depth you

want. My rule is that tenons should be approximately three quarters of the width of the mortise stock. Gang the rails and with a marking knife, scribe the shoulder line on all faces.

**2** Set the mortise gauge using the width of the chisel. I make my tenons half the width of the stock, so 19mm stock will have a 9mm mortise. I find this a good size for most mortises and it is the width of my mortise chisel, not by coincidence!

**3** Adjust the gauge so that the mortise is in the rail centre. Mark the tenons, before setting the rails aside. ➤



PHOTOGRAPH BY MICHAEL T COLLINS

## Wood

Maple (*Acer saccharum*)

## Cutting List

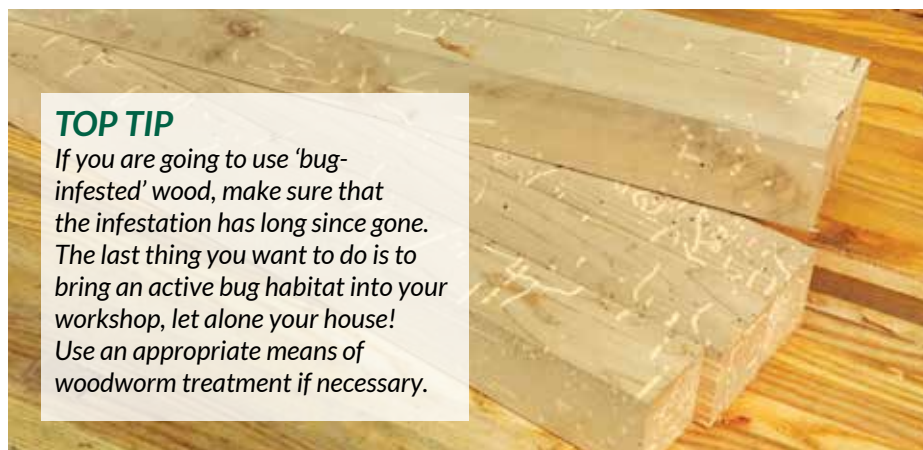
- Legs – 4 @ 45 x 45 x 760mm (including 25mm waste)
- Rails – 4 @ 360 x 100 x 19mm (including tenons)
- Top – 3 @ 154 x 460 x 25mm

## Tools

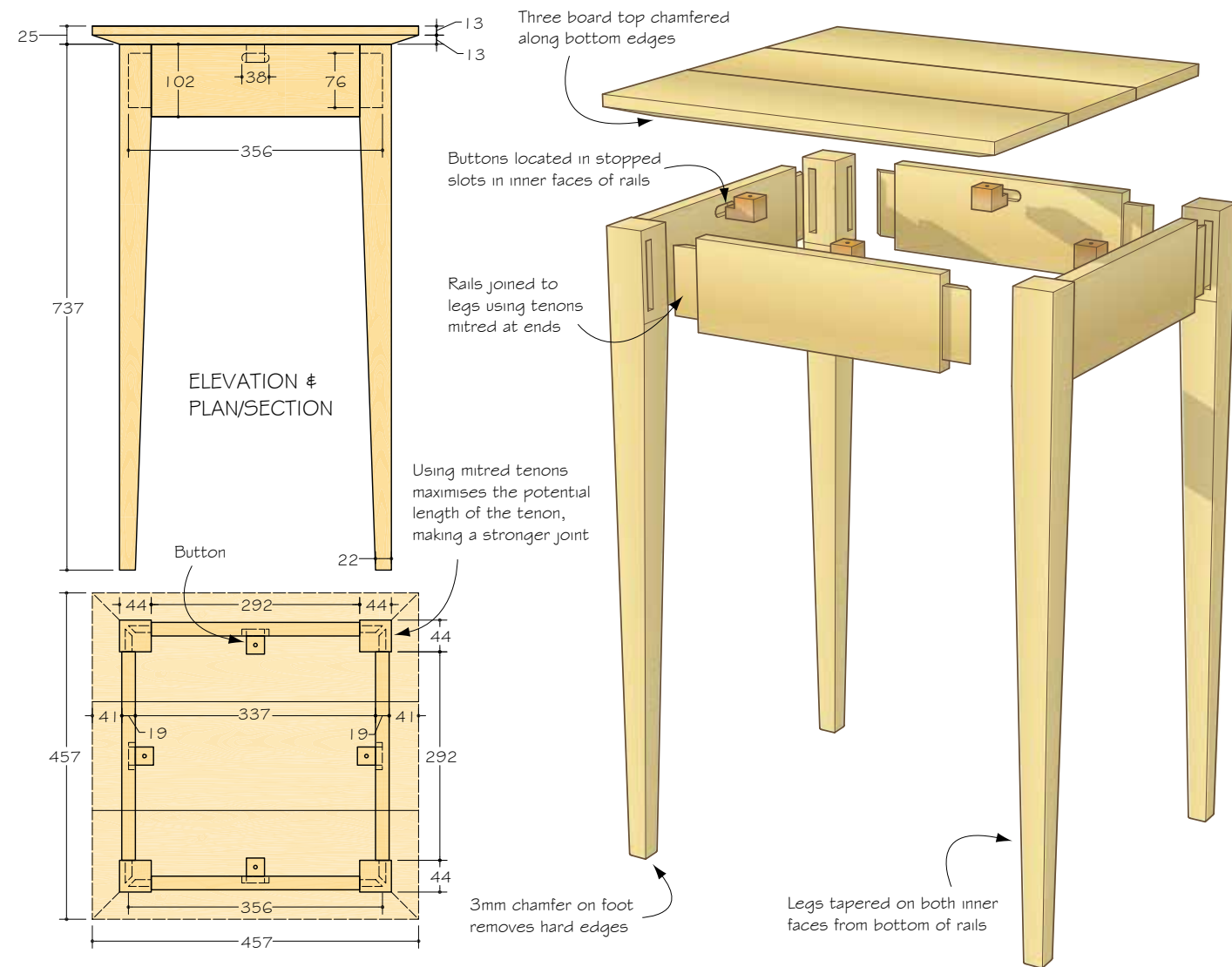
- Rip and tenon saw
- 10mm mortise chisel
- Jack, jointer and block planes
- Brace and 9mm twist bit
- 19mm bevel edge chisel
- Marking knife and mortise gauge
- Try square

## TOP TIP

If you are going to use 'bug-infested' wood, make sure that the infestation has long since gone. The last thing you want to do is to bring an active bug habitat into your workshop, let alone your house! Use an appropriate means of woodworm treatment if necessary.







### Chopping the mortises

**4** Arrange the legs to give the best look and distinguish them with a cabinetmaker's mark, keeping the apex points to the front. Using this method ensures you always have legs in the correct orientation for marking out and assembly.

**5** Mark the face and edge side and gang the parts together. Lay out the mortise location using the rail width, a try square and pencil. The actual mortises are going to be centred and 25mm shorter than this dimension.

**6** It's a good idea to identify the general location of mortises with pencil, prior to marking. It is so easy to chop the mortises, only to find that one is in the wrong face. How do I know this, you might ask? Well, from personal experience of course!

**7** Scribe the mortises carefully so you have two clear lines to work to, in the case of each mortise.



**8** Place the wood over a leg of your bench so that the forces are concentrated in the chop rather than absorbed by the bench. Chopping a mortise is a matter of placing the chisel with the bevel facing the mortise and about 1.5mm from the end (this will protect wood from being damaged while removing the waste). Now 'march' the chisel towards the other end of the mortise. With each successive blow, the chisel will go deeper into the mortise. Continue to within 1.5mm of the end, then 'about face' and repeat the process back to the start, clearing out the chopped wood as you go. Only remove wood that has been chopped; never try and pry out un-chopped material as you are likely to split the wood and, at worst, bend or even snap the chisel. Lastly, true up the ends of the mortise by chopping vertically down the end mark. If two mortises are going to intersect, only chop the mortise down to the level of the intersecting mortise. This way you will have support at the bottom when chopping the intersecting mortise. You can draw a line or add a bit of tape on the chisel as a depth gauge.

### Shaping the legs

I have long admired the elegantly tapered legs of George Hepplewhite furniture, so I wanted to incorporate tapered legs into this project. It was with a certain amount of trepidation that I embarked on tapering these legs, wondering if there was enough substance with all that wormy wood! Luckily in this case, the wood still maintained a lot of integrity.

**9** The legs should taper to half their original thickness, so from 45mm to 22mm. The tapers are on the two inner mortise faces of the legs and start at the bottom of the rail position. Mark these for the same reason we did the mortises, because it's easy to taper the wrong face.

**10** Using a pencil, mark the upper extent of the taper and then add the final dimensions on the bottom of the leg. Connect these locations with a diagonal line. Now remove the bulk of the waste with a rip saw. Add a small wedge to the top of the rip to lessen the friction on the saw.

**11** Plane down to the line with a jack plane and finish using



a jointer plane. Be careful not to encroach beyond the upper marks as it will ruin the mating surface between the rail and the leg.

**12** Once the legs have been tapered, 'ease' all the edges with a block plane.

**13** Add a 3mm chamfer to the bottom of each leg. This looks better, prevents breakout and avoids catching or scraping floorcoverings. ➤



### TOP TIP

Mortises and tenons should be gauged from the face side – by doing this, any errors in the wood's thickness will be orientated to the back and not affect the joint. This table will have a 3mm reveal between the legs and rails on all sides. Using the same mortise gauge setting that you used to mark the tenons, add an additional 3mm between the fence and the position of the first spur.



### Cutting the tenons

**14** Cut a 'V' groove on the waste side and then pare out a notch using a chisel. This will give your saw a place to run and produces a very clean shoulder. Saw down to the shoulder marks. This technique was first shown on the Shaker shelf project in *Woodworking Crafts* issue 16.

**15** Place the rail in the vice at 45° and mark a small 'V' notch on the waste sides of the mortise line. Saw down to the ends of the scribe marks you can see. Do not try and saw to the shoulder in one pass as this is prone to error. Rotate the wood in the vice and again saw at 45° using the saw kerf as a guide. The small triangle of wood at the bottom of the kerf can be removed with a few saw cuts.

**16** Finally, use a chisel to clean up the shoulders. Test fit as you go and label each joint.

**17** These tenons are going to intersect inside the leg and need a 45° bevel on the ends. I have cut them shorter to allow a small gap between the mitres, enabling seasonal movement inside the leg. Dry fit the legs and rails, checking for squareness.

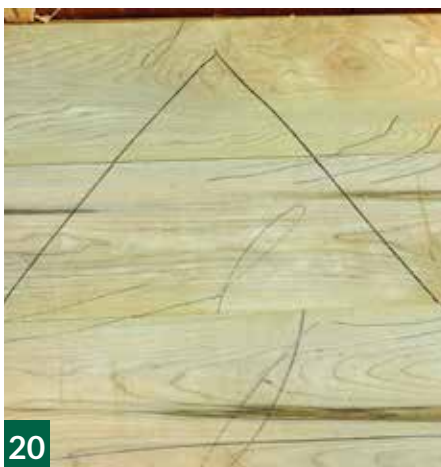
### Attaching top to base

**18** These boards are likely to move with the seasons by approximately 3mm for every 300mm. Because of this seasonal movement, the last thing we want to do is rigidly screw the top to the base. Instead, you will make some L-shaped buttons to be inserted into pockets, that allow the top to float. Using a 9mm twist bit, create a 32mm pocket in the centre of each rail, 12mm from the top, and chop out the waste.

**19** Then, using some left over hardwood (I used cherry) cut a 11 x 12mm rebate on the edge of a board. Then drill a countersunk hole and cut into buttons 25mm wide.

### The top

**20** I did not want to use wormy wood for the top, but instead chose some of the maple that was spalted (with partial rot), which gave some very nice patterning. While the glue is setting on the base, select three pieces of wood that have similar grain structure and arrange them to produce a pleasing look.



**21** Plane mating pieces together; this way the joint is pretty much guaranteed to fit. This technique was explained in detail in my project on making a table top in *Woodworking Crafts* issue 2.

**22** A rubbed glue joint and some clamping pressure is all that is needed to keep these boards together. Wipe away any excess glue. Once dried, any squeeze-out can be removed with a card scraper. Use eye protection when doing this; dried glue is sharp!

**23** The top needs to be cut to a 'hair' over 460 x 460mm, so that it can be planed to the final size. Add a chamfer on the underside so that the edge is 12mm and it is as wide as the 38mm overhang. This will give a pleasing edge and gives the illusion that the top is thinner than it really is.

**24** With the plane held at an angle to the grain direction, plane the end grain first. Any tear-out will be cleaned up when the long grain is chamfered. Make sure that the chamfers meet at the corners. Always start by working on the underside of a table. This way you finish with the visible surface uppermost and it is less likely to get damaged by placing it down on something.

**25** Use a smoothing plane to finish the top surface, with the blade set to produce reasonably fine shavings. Lightly ease the upper edge with one pass of 220 grit.

### Attaching the top

Before attaching the top, sand all the parts with 180 and 220 grit. Then give the table two coats of amber de-waxed shellac, sanding lightly with 320 grit between coats and allow one hour to dry. In this case, it really brought out the crazy wormy pattern as it soaked deeper into the worm trails. It's a good idea to finish the top and base separately so that the shellac does not glue the parts together. Shellac dries very fast so feather the edges in with a polishing rubber as you work.

### Supplies

De-waxed shellac is available from: [www.shellacfinishes.com](http://www.shellacfinishes.com)



**26** Once dry, the buttons can be screwed into place. Because the rebate on the buttons is 1.5mm less than the distance from the underside of the table to the pockets, the top will be cinched tight against the top of the rails but will still allow movement.

**27** Finally, give the top three more coats of shellac using a rubber (a wad of cotton), lightly sanding between coats. The result of your labours is an organic effect from reclaimed wormy wood! ■



### Michael T Collins

British-born Michael has been working with wood off and on for 40 years. He moved to New York in 1996 and over the years, has made bespoke furniture, including clocks, inlay work, Adams fireplaces, book cases and reproduction furniture.  
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