

fouling by stock and other animals contributes to poor water quality; and there's evidence that carp root out water plants and stir bottom and bank sediments during feeding, increasing muddiness.

Warm water temperatures encourage blue-green algae to flourish under calm summer conditions and to grow rapidly when water temperatures exceed 18°C. Solar heating results in warm lighter surface water over the colder lower water. This causes two distinct layers to form (this is called thermal stratification). The algae flourish in the warm surface water, and the reduced oxygen levels at the bottom assist the release of phosphates from sediments into the water; these feed the algae.

What to do about it

Algal blooms in farm dams can be treated (billabongs and natural waterways must not be treated) with alum and gypsum to remove phosphorus from the water: refer to your DPI for recommended practice. However, improved management of nutrients is the key long-term strategy. If nutrient levels of the water remain high, blue-green algae will continue to be a problem. There are many ways to reduce nutrient content in farm dams to help prevent toxic algal blooms:

- Mix water with generator pump aeration to prevent temperature layering and improve oxygenation.

- Nutrients, particularly phosphorus -- present in fertilisers and manure -- should be carefully managed in dam catchment areas. Avoid excessive use of fertilisers. If possible, fence out stock and divert stockyard and sheep camp run-off away from dams. Establish gravity-fed troughs for drinking water.

- Use irrigation scheduling techniques to eliminate run-off from irrigated agricultural land. If there is any surplus water, it should be recycled. Domestic washing powders and detergents containing phosphate and septic effluent are other potential sources of phosphorus, which may need to be controlled. Remove carp from dams.

- Control soil erosion to stop soil particles moving into farm dams. Buffer strips of

vegetation (perennial grasses and trees) can be placed in the in-flow areas to help stop nutrients and eroded soil from entering farm dams. Long grass, shrubs and trees slow water flow, intercept nutrients and prevent erosion. This area should be fenced from stock.

Farm dams are an asset and important water source for livestock, so it pays to care for this important resource.

Source: NSW Department of Primary Industries Primefact 414.

BELOW: BLUE-GREEN ALGAE INFESTATION ON LAKE BURLEY GRIFFIN NEAR THE HIGH COURT OF AUSTRALIA/ NATIONAL GALLERY OF AUSTRALIA PRECINCT. © DEPARTMENT OF THE ENVIRONMENT



"A work bench is essential for any quality work — you can always do rubbish on trestles"

A fine bench

Fine furniture maker Phoebe Everill teaches the basics by starting with a workshop essential, the workbench.



By KATHY MEXTED

On a 70-acre block down a Victorian country lane between Kyneton and Glenlyon, Phoebe Everill has recently built a third annex to her woodworking studio. Exquisite hand crafted original design furniture keeps company with an array of pristine tools in a purpose-built tool cabinet. The pungent smell of fresh moist wood shavings fills the room like the bread from a baker's oven.

In the classroom, half a dozen purpose built work benches jut out from the wall and Phoebe works with her students, smearing glue, checking joins, guiding, teaching and encouraging. Phoebe loves teaching, furniture-making and teaching furniture-making.

"I love watching people go through the process of making a piece for the first time. There's an expansion that occurs in them. After about three or four hours, they pull goofy faces when they can't believe what they're achieving with their hands. I think as a society we're losing touch with making and the first thing I teach in my classes is a workbench. Without a workbench you don't have the ability to work properly at home. It is essential for any quality work—you can always do rubbish on trestles," she says.

Phoebe grew up in Malvern as the fifth daughter of six children. Her dad, at 50, followed a dream to learn cabinet making and joinery. As the 'baby', Phoebe spent her teens tailing her father in the

workshop and in her early 20s trained with her father.

In 2000, Phoebe went out on her own building and renovating. Her expertise was sought for the fine detailing and fix-out and the business flourished until the work became too heavy and she sought new direction. While jealously eyeing fine furniture in galleries, furniture making became a natural direction for her to explore.

In 2009-11, Phoebe trained at the prestigious Sturt School for Wood in Mittagong, training in fine furniture making and design and now teaches there a few times a year. She is regularly called upon to guide students through the important last couple of weeks of the course as they complete their \$18,000 intensive Certificate IV in Furniture Design & Technology (Fine Furniture Making). Teachers are sourced from Australia's best and mainly from America. Phoebe's no-nonsense attitude and attention to detail pushes the students to excel and to understand the importance of the school's standards in excellence. She tutors and oversees the finishing of exhibition pieces.

In 2012 Phoebe stayed on as the School's Artist in Residence and is now Chair of the Studio Woodworkers of Australia, the peak body for fine furniture makers in Australia. Acceptance into the exclusive group of 26 is by peer assessment. Her style is heavily influenced by the clean lines of Scandinavian design, and her Blackwood 'Winton'

chair pays homage to the Australian writer, whose work she admires.

"I work with wood and Tim works with words. I'm immensely impressed by somebody who can write that line that stops you. You take a breath and think 'wow'. My artform is more functional. I'd love to be able to make something mad, but at the end of the day it has to work. It has to be sat on."

When Phoebe selected her property, apart from the beautiful view, the stands of blackwood timber along the creek were its biggest drawcard. The property has enough storm-fallen logs to be milled and the first time they leave the farm is as a signed piece of bespoke furniture complete with a provenance sheet. Her focus is on sustainability and solar roof panels and wind turbine on the workshop endorse that.

"Blackwood polishes divinely. It has fabulous tonal colours and fiddleback. A year's supply of wood comes from one tree. It's important to me to be sustainable when harvesting, and once the fallen logs have been exhausted, we will replant 90 trees for each one that we cut down," she says. Foremost to the business principle is the opportunity to mentor and to create tomorrow's antiques.

"I believe that what we're trying to do is make tomorrow's antiques. The things that will be treasured heirlooms. This is not necessarily about having some amazing talent, it is more about having the desire to learn and achieve and to accept it takes time to learn."

And it all begins with a work bench. Phoebe will be running a workbench workshop in early March.

<http://www.phoebeverill.com>

Clamps: Use two 900mm pipe clamps. Extend using extra pipe for longer sides.

Height: Adjust height of bench to suit yourself, taking into account extra height if using castors. They should be heavy duty locking castors.

STEP 1

Workbench top: 3 x (240x45mm) F17. Glue long sides together and clamp. Allow 12 hours to dry. F17 structural beams that are laminated and

finger jointed. It means that it's coming from a sustainable outlet using short sections and helps keep benchtop flat over time

Note: I send these tops to a joinery for a 'thickness sanding' to ensure they are really flat
Bench Top: 3 x 1800mm long x 720 wide x 900 high.



STEP 2

Legs: Four legs @ 90mm x 90mm posts dressed down to 76mm square (Most timber yards will do this for you).

MORTICES: Markout mortices on legs.

Top: Centre a rectangle 15mm wide and 70mm long.

It should be 20mm from leg top and 30mm from either side.

Bottom: As above, however the bottom rail is larger and so hole needs to be 90mm x 15mm x 35mm deep

Note: it is easier to do the mortices first and then make the tenons to fit them

STEP 3

Drill holes using an overhead drill with a 15mm Forstner bit. Holes should be 35mm deep

Clean out the mortices, using a sharp chisel and mallet, ensuring mortices are free of debris in the bottom of the holes.



STEP 4

TENONS: Using a 300mm sliding square, **markout** the tenons on the rails being careful to do this accurately as it will make for a better fit.

Tip: Use a clamp to free your work up and save work sliding. Remember to 'mark out' the waste. It saves a lot of mistakes.

Shoulder is 35mm from the end. Cheek is 10mm from edge.

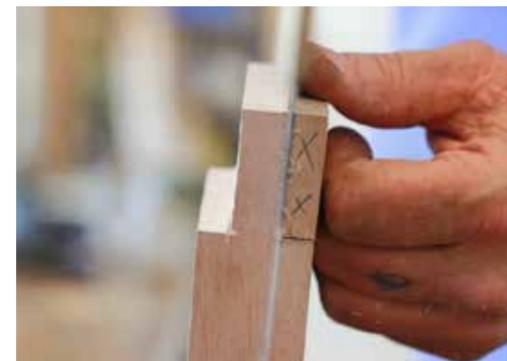


STEP 5

Using a tenon saw cut all the Tenons and then cut the 'haunch' out of the top rails

Note; if your lines are accurate you should be able to cut the actual line and ensure a good fit. Shoulder is 35mm from the end. Cheek is 10mm from edge.

Tip: Clamp the work to save it sliding. 'Mark out' the waste to save a lot of mistakes.



CUT OUT THE "HAUNCH" ON TOP RAIL

STEP 6

DRY RUN: Test fit the shorter end rails numbering them as you go.



When they all fit, then glue and clamp. Note; you may have to do some more paring with a chisel to get a good fit, and make sure you clean out the shoulders. Leave to dry

Then repeat the process with the longer side rails. If it is too tight, pare back the tenon with a chisel. Check bottom of mortice is clean. Always adjust the tenon – not the mortice.

If tenons are too long, measure the gap, then add 1mm and take that off the tenon using a handsaw.

STEP 7

The Bottom Shelf is cut the same dimensions as the outside of the rails with cutouts for the legs. Fix it to the rails using glue and screws or using nails.



STEP 8

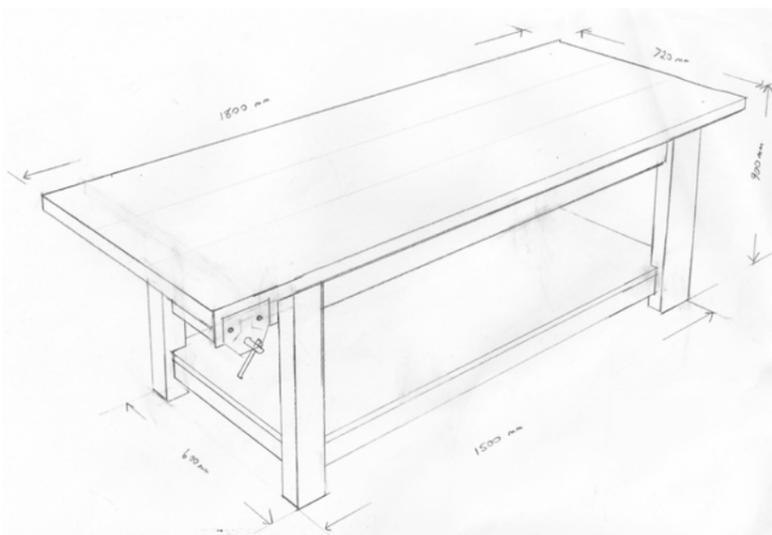
Attach the 'figure 8' fittings to the rails approx 100mm in from all corners and then screw the top on from underneath.

Note: When positioning the top, allow 200mm at one end if you are going to add a vice.



STEP 9

A coat of floor grade oil will keep the top in good condition and stop spills from damaging the timber.



My brother Jack: horse-breaker

The Lintons and Billabong Station idealized the Australian way of life. For many they offered the notion of an orderly, established, self-contained and comfortable society of clear-cut, conservative values and a picture of romantic outdoor life, appealing equally to city and country readers alike (Mary Grant Bruce, The Billabong Series 1910-1942, McVitty, 1989)



By MELINDA HAMMOND

When it's 6.00am and, although I've been driving for an hour, I'm late. Forget that it's Sunday morning and the end of another school year with all its nightmare marking and frantic report writing activity for those of us that teach. Forget that I have now missed the sunrise pics I'm here to take - of horses, it seems, that now won't be arriving for another few days. But I'm just in time for pancakes and a cuppa. Smoko, like everything else around here, starts early. As described in the Little Bush Maid stories of my long ago childhood, I'm looking forward to a day of hanging out with a couple of young horse breakers. 'Breed 'em, break 'em and sell 'em,' is how it works, I've been assured. And Jack and young brother Brock are going to show me how it's done.

School's out and the long summer holidays stretch endlessly like the cane farms I've been driving through to get to my date with Jack, horse-breaker and gunna-be heartbreaker, and his little brother-in-training, Brock. Jack is sixteen, has his own horse breaking business,

and owns a ute, rifle and a couple of horses. 'He works hard,' Dad says, 'but he knows there's a reward at the end. Last year it was picking mangoes but this year the horses will keep him busy enough!' Boy toys, it seems, are worth working for, up at daybreak, knocking off way past dark, with a whole lot of work to do in the middle. I think of my own daughters, still tucked up in their beds, and most likely will remain so for the best part of the rest of the morning. Their toys consist of gizmos that require no early starts, business acumen or any effort at all really. 'Can I have, can I have, I want I want,' is a long familiar tune hummed at our urban abode. They should have come with me to learn the fine art of hard work from sun-up to sun-down, or at least hung around long enough to marry a farmer.

Don't fizz the horses

Four horses to break, two hours a day, an hour in the morning and one late afternoon after the heat, half an hour a horse, leaving the rest of the day for all the other jobs that go with the territory of living on a farm. 'It's important to take it nice and steady,' Jack explains. 'Think about little kids in a classroom