

Aviary Design and Construction

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Continued from the August edition

The Roof

Another of my pet hates - aviaries completely covered with a solid roof. All creatures enjoy rain at some time or another. I believe you should have at least a third uncovered, preferably half, perhaps even three quarters, a lot will depend on the size of the aviary, but all creatures should have access to sun and rain. By all means provide them with plenty of shelter, which you will need to do to be able to keep the feed dry, but *please* let them have access to rain and sun and wind. You will breed much hardier creatures this way. I live in a hot part of the world (in summertime we have long periods of mid-forties) and some of my aviaries have very little cover at all. In our situation its main use is shade and wind protection. On some of them, the solid sections of the walls don't go right down to the ground. This is to allow air movement at ground level.

Which brings me to:

Orientation.

Some people say always align your aviaries **East/West** or **North/South** or some other compass bearing - **forget it!!** - Every back yard has its own mini ecosystem and is different from your neighbour over the road. Look at your own situation and arrange your aviary, if possible, to collect the early morning sun, be protected from the hot afternoon sun and from the worst of the winter wind and rain. It's a bit of a tall order to be able to fulfil all these requirements but it is possible, and it is not all in the orientation. You can make use of existing structures or trees for shade and shelter. If you are finding that the rain is blowing into the back of your aviary you could arrange a vertical solid section at the entrance to the covered end but if you are keeping birds, make it, if possible, from a see through material but not clear; it allows too much heat into the area in the Summer; birds will not fly into a dark area. The alternative is to have a skylight in the covered end. If you are keeping nocturnal animals this is irrelevant.

Pests

Another question that came up several times at an Avicultural Society meeting was the question of mice. How can you build an aviary to keep them out. The simple answer is: you can't. I do not know of *any* truthful creature keeper who keeps seed-eating birds or animals and doesn't have,

or hasn't had, a mouse problem at some stage.

You could possibly design and build a mouse *resistant* (not mouse proof) aviary by using the following suggestions but there are no guarantees - they will eventually find their way in somehow.

Mice will get through 12mm (½") mesh, or at least young ones will and then they grow up and can't get out. The alternative is to use what is known as 'mouse and snake wire' which is 6mm (¼") mesh, but it is very expensive and what do you do about the solid sections of your aviary? Do you bung up all the holes or do you use flat sheet material? Then what do you do about the floor? Do you use mouse wire again (and wait for it to rot) or do you go to the expense and hard labour of concrete. If you're keeping parrots they will probably chew holes in mouse wire (it's only 0.6mm gauge). It looks like it's all starting to get too hard!

There are some simple things you can do that don't involve a lot of work or expense. First and foremost, have a regular poisoning programme. There are many ways in which you can bait an aviary without worrying about the birds. You can use a bait box (purchasable at Avicultural Society meetings or any reputable bird dealer and even some of the better pet shops), a very cheap and simple method is an ice cream container with a couple small holes cut in the side then placed upside-down over a smaller container with poison in it and a brick on top to hold it down. A word of caution here for keepers of carnivorous creatures. I would strongly suggest that you do *not* bait for mice, as they may be picked up by one of your prized raptors with dire consequences. Raptor and carnivorous animal keepers are lucky in as much as their aviaries are relatively mouse free anyway for obvious reasons.

Another trick, if you have the space, is to make sure your aviary has a cleared area all around it, preferably something solid like a concrete apron, pavers or paving slabs. Make it so the mice have to cross a reasonably wide-open space before they get to the aviary - they don't like it and will avoid it if possible. Also keep water away from the outside of the aviaries - under normal conditions mice won't travel more than about 10m (30ft) from a water supply. Obviously you have got to have water inside the aviaries but keep it well away on the outside (no dripping taps, pot plants with saucers, ponds, leaky hoses, dripper systems, *etc. etc.*). I realise some of these suggestions are not very practical, but they will help.

So what sorts of materials are you going to use to build this fantastic creature complex?

Materials

We've many choices: Timber, Steel, Mesh or a combination of all these.

Timber

As we are talking about Australian conditions there is not a lot of choice with timber - probably CCA treated pine is the best (that's the green stuff) but don't house 'flying bolt cutters' in such an enclosure otherwise you'll have no aviary left and probably a dead bird or two. Although having said that, I have built aviaries for the smaller parrots using Permapine and they served me very



well for a lot of years. They look attractive but they are very difficult to dismantle if you have to move and they require more maintenance than steel. Permapine tends to move a lot - it will expand and twist when it gets wet and will do the reverse when it dries out. I have seen 100mm (4") twisted galvanised roofing nails work their way out by as much as an 25mm (1") or more over quite a short period of time (basically two seasons).



I have also used Creosote treated pine but although it has that beautiful nasal clearing smell, it is dirty to work and an extreme fire hazard. I've used some of the off-cuts as fire lighters and they burn very fiercely. I would also worry about creatures chewing it and ingesting some of the chemicals involved. Just a note here about CCA treated pine – **do not burn it**. It will give off Cyanide gas that is extremely toxic to anything that has the misfortune to breathe the vapours. Please dispose of it safely and responsibly.

The two pictures on this page show a bank of six aviaries manufactured using CCA treated Pine that was simply cut to size and bolted together.

The whole complex is 9m square with an access corridor to all six aviaries across the back. It was installed on a sloping block and housed a variety of the larger parrot species in the beginning and later used for Brush-tailed Possums. I was not aware of any losses due to the treated pine.

Now if want to get really carried away you could go for a less conventional design than the one pictured above and go for something like the photo on the following page.



This aviary is also made from CCA treated pine and uses both poles and rectangular section and is assembled in a similar fashion to the bank of six. However, I, being a perverse sort of character, decided it would look better with the wire of the roof attached on the inside rather than the outside, which it does, but it was

to put it bluntly, a bastard of a job and I would never attempt it again (unless somebody offered me squillions of dollars and even then I would have to think twice).

The joint at the apex was a little tricky but basically the roof supports are angle cut and then nailed to the centre support post. Then the whole assembly has a “chinamans hat” screwed in place over the top. To tidy the whole thing up I decided to include a finch



nesting complex at the apex, which was used, regularly by my Double-barred finches.

You will note that this aviary is also on sloping ground and you can also see that there is a more conventional flat roofed covered area attached to one side of the hexagon, which was used for more nest boxes and as a feeding area. This area also had a safety door

entry.

Now we come to the more traditional choice of:-

Steel

I mostly use 20mm ($\frac{3}{4}$ ”) x 20mm ($\frac{3}{4}$ ”) x 1.6mm ($\frac{1}{16}$ ”) square galvanised tube (or sometimes 25mm (1”) x 25mm (1”) x 1.6mm ($\frac{1}{16}$ ”)) welded together to make a frame. I’ll discuss this in more detail later under the

heading of construction.

Meshes

Mesh type and size.

There are myriad different types of aviary meshes available but the basics are the **chicken wire** types and the **welded meshes**.

If I am building an aviary to sell I would always use an Australian manufactured weldmesh but I have, and do, use chicken wire on large '*in situ*' aviaries of my own, particularly for birds of prey. It is much 'softer' and the birds do not seem to damage themselves like they do behind a conventional 12mm (½") square weldmesh. I would actually much prefer to see these types of birds behind aviaries of vine netting for at least the roof and half way down the sides, but you do really need wire or some form of solid material for, at least, the bottom half of the walls simply for mechanical protection from outside.

Combination

Here the choices are up to you - use whatever suitable materials you have at hand. You could have steel posts (for termite protection) with timber at roof height - particularly if you want to have a shade cloth roof. It's much easier to attach shade cloth to timber rather than to steel. I mentioned earlier a 60m (200ft) square aviary made of shade cloth and I thought you may be interested in how it was fixed at ground level. It was a very simple but very effective idea. Basically a trench was dug all around the perimeter of the aviary 1m deep and 1m wide. The ends of the shade cloth were then placed into the trench and it was then backfilled. It is never going to move - believe me!! The only weakness in the whole structure is where the support pillars meet the roof and after a lot of years of good service it is starting to show signs of wear at these points.

The secret with a shade cloth roof is to make sure it fixed so that it cannot move, rub or chafe against anything else. If it is fixed it cannot wear - it is only where there is movement where there is going to be a problem. Take particular care on the lee side of any such structure - this is where the most wear is going to occur. (If you think of a flag - which part of it is doing all the flapping?).

To be continued