Keep the Birds Out Leo A. Martin October 2006

I have sown many seed pots only to find pots overturned, soil and seedlings scattered everywhere. Not only is there a mess to clean; such seedlings seldom survive. Curvebilled thrashers are the main culprits, but doves, quail and ground squirrels also wreak havoc. In fact, for the last few winters I haven't planted any mesemb seeds, since I don't have reliable protection against critters.

The Lamborghini of bird protection is, of course, a secure greenhouse. Properly constructed and locked, it keeps out not only birds and rodents but also two-legged varmints and their larvae. Greenhouses generally require plans, permits from the city, solid construction techniques, and plenty of money. There tend to be regulations limiting their size and height. If you have the space and means, by all means build one.

If you only want to protect a few pots of sprouting seedlings, I might suggest a birdcage! Used ones show up at yard sales. How appropriate! They can be covered with a small piece of shade cloth or frost cloth if desired.

Moving up the addiction scale, simple growing frames don't take long to construct and are inexpensive. Often materials can be found second-hand at metal salvage yards.

Such frames consist of a low wooden box with sides often made of $2 \ge 12$ boards, or plywood over a $2 \ge 2$ frame just covered by a screen door or a pair of sideways-sliding screen windows. The door hinges on the side away from where the gardener stands, and can be propped up with a stick during work periods. If sliding screens are used, the gardener can reach half the frame at any time. The frame should be deeper than the deepest pots to be used, plus some room for plants to grow. For mesemb seedlings, this is not very deep. The frame should not be too large, or there will be spots the gardener cannot reach.

In some climates, such boxes have not only screens, but also outer glass doors, to be closed on frosty nights. Mesemb seedlings seldom mind our mild frosts, and if the gardener forgets to run out and remove the glass early on a sunny morning, there may be steamed seedling salad.

The box can rest on the ground. In this case, there is the risk of tunneling rodents entering. Or, it can have a bottom and be placed up on legs, the better to reach in without stooping. Boxes with bottoms require some path for water's egress. Fitted with casters or wheels on the legs, the frame becomes portable.

Often a layer of sand or gravel will be placed on the bottom of the box for drainage, as well as frosty-night heat storage. A heating cable can be buried in the sand to extend the growing season for warm-growing seedlings such as cacti. Winter-growing mesemb seedlings don't need this in our climate.

A "temporary" screen structure provides even more room. In many jurisdictions, the building department treats a structure not firmly attached to the ground more leniently than would be a permanent structure with foundations.

Steven Hammer has screen houses featuring shade cloth sides and top over frames of metal pipe. The Desert Botanical Garden uses similar frames to hold up the canopies at the Plant Sale Festival, and these frames are sold at various places here in the Valley. These frames typically feature a rectangular footprint, with legs spaced about every eight feet, and a peaked roof. Most tent canopies have legs that are free at the bottoms, but Steven's frames are complete boxes of pipe, top, bottom, and sides, for added resistance to twisting in the wind.

The pipes slip-fit into corner fittings welded of pipe and are held tight by winged screws at the joints. The frames can be assembled and disassembled quickly (by at least two people) and stored in a small space. We have windy storms here, and the frames would need to be anchored securely. For this, some people attach five-gallon buckets filled with concrete to the vertical legs.

The floor is covered with mulch fabric, which extends past the perimeter of the frame. The frame is wrapped with shade cloth to keep out pollinating insects, chewing rodents, digging birds and too much sun. The shade cloth is stitched together at the seams. The top is covered with three millimeter thick clear plastic for rain and frost protection. One end of the structure has a screen door fitted into the space.

His benches well suit his plants: Steven's plants are mostly in square pots smaller than 6"; none of his plants is very tall. Bench tops are open rectangular frames made of 2 x 4s. They are supported with 2 x 4 legs spaced about every six feet. On the mulch fabric under each leg rest one or more concrete blocks or fragments, used to distribute the weight of the bench legs on the mulch cloth, and to keep the wooden legs off damp earth. On top of the frame are set--not fastened--pairs of 2 x 2 pieces that span the frame, and are positioned at the proper distance to support standard black plastic nursery flats. The pots are set into the flats. The height of the benches can be varied by changing the number and orientation of the concrete blocks, the lengths of the legs, and the size of the wooden crosspieces. This setup might be precarious for heavy pots and large plants, but it works very well for smaller ones, and is simple to construct.

Modified for our local predators, a two inch band of sheet copper on each bench leg would keep snails and slugs from climbing to the plants, and a 12 inch band would keep rodents from climbing the legs to feast on our gems.

Soon your only problem will be what to do with all the extra seedlings.