

he success of breeding parrots in captivity depends on a great number of factors including diet, aviary space and nesting facilities. Often the least amount of planning goes for the proper nest box, which is a requirement for all but the monk parrot. The mere sight of a newly introduced nest box often sets into motion courtship and mating behavior. Once a box has been selected this facility serves as the sacred quarter where all the intricate biological processes of egg laying, incubating and the rearing of young take place. Many failures of rearing the young are directly attributable to a poorly designed, poorly arranged or otherwise unacceptable nest box. In this article I will address myself to many of the questions relating to nest boxes for lovebirds (genus Agapornis).

Natural History: All serious breeders are interested in how their aviary subjects behave and survive in their natural environment. Unfortunately, written accounts of lovebirds living in the wild are quite incomplete, and for two of the nine species we have no recorded sightings of nests, eggs or young. A summary of what is known follows.

Hollow tree trunks are the favorite nesting site for Abyssinian (A. taranta) & Madagascar (A. cana) lovebirds. Though they line their nest with small pieces of leaves and sometimes bark, this lining is very thin and never produces a domed nest seen in some of the other species. Fischers' (A. fischeri), Masked (A. personata) and Nyasa (A. liliana) also use predominately hollow trees, however. their nests are intricately filled with an abundance of nesting materials. In addition, these latter three species have also been observed nesting in and around buildings of towns and villages. The Nvasa lovebird is also known to occasionally utilize communal nests of weavers. Though nothing is known about the nesting sites of Blackcheeked (A. nigrigenis)

## Nesting Facilities in the Genus Agapornis

by Rainer R. Erhart

we can assume that their breeding behavior is similar to those of the Nyasa love-birds.

Peachface lovebirds seem to be most versatile and most adaptable to a variety of environmental conditions (perhaps this is also the reason why they are such adaptable and prolific breeders in captivity). Thus they may be seen nesting in rock cavities, eaves or cracks of buildings and hollow logs. Yet most frequently they have been observed nesting in large communal nests of weaver finches. Here several pair may occupy separate spaces within the same large weaver nest measuring two, three or more feet in diameter.

A most unusual nesting site is selected by the Redfaced lovebird (A. pullaria). which seeks out arboreal termite mounds. In it, it burrows tunnels leading to an enlarged cavity. A thin layer of leaves finally finishes the spartan looking maternity room. Ornithologists believe that the nests of Black-collared lovebirds (A. swinderniana) are also found in arboreal termite mounds but no one has ever proven it. Of all the nine species of lovebirds swinderniana leads the most secretive existence in the dense tropical rainforest of central Africa. It is the only species which to our knowledge has never been successfully kept by any aviculturist.

From my brief description of lovebird nesting facilities in the wild it is clear that most can be provided with similar nest boxes. Only *pullaria* and *swinderniana* need special consideration and since these arrangements are so very unique I will omit further reference to these two species. A description of their nesting behavior would deserve a separate article.

Nestbox Construction: I prefer a standard size nestbox for all but the Madagascar lovebird. The boards used for construction measure 8 inches wide for the sides and 7 inches for front and back. This gives an interior measurement of roughly 6½ by 6½ inches (you should remember that an 8 inch board has an actual measurement of only 7½ inch, while a 7 inch board is only 6½ inches wide). I limit the height of the box to 10 inches (see Figure 1). Using a larger box is wasteful and often undesirable. Humidity and temperature levels are maintained better in smaller spaces, provided the box

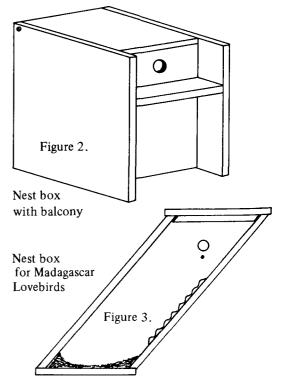
is made of the proper materials.

The entrance hole of the boxes need not be larger than 2 inches. A smaller diameter of 1% inches can be used for all the white eye ring species. For the Madagascar lovebird a 1½ inch diameter hole suffices.

Upright nest boxes for lovebirds are in my experiences better than horizontal boxes. This is particularly true for the white eye ringed species which stuff their boxes so full with material that the lid of the horizontal box is forced open more readily than that of the vertical box.

A simple box type is easiest to construct and to maintain, however, some alterations are beneficial in aviaries where more than one pair is breeding. For example, to preserve privacy and to restrict quarreling the entrance can be protected by extending the side walls (Fig. 2). This gives each pair their own little private balcony. Incidentally, a running board in front of the entrance hole is very much preferred over a simple perch. Furthermore, it is best not to let the roof protrude. Young which have just left the nest can more easily make it back to their boxes if chased by other birds by gliding down from the roof or over nest box onto the running board and into the hole. I have observed this behavior many times.

Since my boxes are all hung up on the aviary wire a simple procedure of a slanted nail will keep the nest box in place. However, make sure that the nails are secure enough so they won't loosen and the box is in danger of dropping onto the floor. Screw-type nonrusting nails (Ardox, gold) are best for this job, just as I prefer to use these same nails in the construction of the wooden nest boxes. There cer-



tainly is less warping of boards with such nails.

A slightly different nest box construction may be of benefit with the Madagascar lovebird. First the interior measurements should be smaller; more on the order of 5 inches x 5 inches. Secondly, because Madagascar have very thinshelled eggs the approach to the nesting cavity should not be direct. Hence a slanted box gives the best results (Figure 3).

Materials Used: Now that we have an idea of dimension, let us talk about what to use in the construction of nest boxes. Proper materials are extremely important for good breeding results. They should breathe, be non-toxic, not too soft, well insulating and easily washable. Considering all these requirements it leaves you only with a choice of solid, untreated wood. (Don't use redwood or cedar; these types of woods are too soft, too splintery and perhaps even slightly toxic). I use 1 inch thick pine; it is inexpensive and comes in a great variety of dimensions.

One of the least desirable boards to use is plywood. Other poor materials are press board, particle board and a whole line of plastic fibers. Most lovebirds keep their nest boxes quite moist. Once moisture gets into the layers of plywood or begins to act with the glues and other chemicals, the boards begin to split or warp. Furthermore the moisture filled cracks will harbor undesirable fungi, bacteria, fleas and lice. Even a good cleaning job will not rid the box of such unhygienic conditions. In fact, laboratory reports of dead young lovebirds and even dead in the shell have often traced the cause of death ot a variety of lethal fungi associated with man-made boards. So why take a chance; it's much more reassuring to have a solid wooden box, which is more easily cleaned, breaths better and hence produces a temperature and humidity environment more similar to the inside of a tree trunk.

Chemical Hygiene: Over the years many articles have appeared recommending one or the other powders or sprays to assure hygienic conditions during the breeding season. Since this subject is very controversial and since there are so many products on the market I hesitate to make any recommendations. I find that most products specifically designed for aviaries are too weak to do any good (chemists trained in pesticides agree) yet other chemicals for use on farms and in chicken coops are definitely too dangerous to use in nest boxes. Therefore, I try to stay away from pesticides as much as I can.

Reusing Old Nest Boxes: Have you

ever seen a wild bird using the same nest for his second clutch? Most certainly, it would be much to risky and losses too high. Yet we do it all the time, sometimes not even bothering to completely clean and sterilize the boxes.

You probably have observed that most starlings, woodpeckers, and parrots in the wild use the same hollow tree trunk year after year. So what's wrong with reusing the same nest boxes in our aviaries. Well, if we would work as efficiently as nature it probably would be alright but often nature provides much better biological cleaning processes. Besides what works in nature may not necessarily work with your inbred birds, or birds which have not built up the same resistency to various bacteria. I therefore suggest that nest boxes be removed and thoroughly cleansed after at least every second clutch.

Cleaning a nest box is not totally accomplished by dumping all the old nesting materials, scraping off the excrement from all surfaces and then running hot water over the entire box. That's only the beginning. After the nest box seems really clean, you should soak it in antibacterial, anti-fungal and possibly antiviral agents used in hospitals and in quarantine stations. I use Nolvoasan, but if you are in doubt on any product consult with your veterinarian.

After I have thoroughly washed and disinfected the boxes I place them into direct sunlight for a few days, then store them for use during the next breeding season. If I have to use a box without proper sun or storage, I will stick it into the baking oven at about 300°. Your wife may not like it, but neither do all those bacteria.

Miscellaneous Considerations: Many breeders use wire ladders for all nestboxes. I prefer to use them only for cana and taranta. The ladders are a definite nuisance in those boxes filled with nesting materials, because it is next to impossible to clean underneath them.

Nest boxes are often supplied with a number of holes near the top. This is to assure better air circulation and hence prevent a build-up of heat. This is especially important for our southern states where temperatures even in spring and fall may climb into the eighties or nineties. During the heat of the summer, however, even a number of holes may not prevent the box from overheating.

Finally, there is the important subject of the proper selection of nesting materials which lovebirds carry into their boxes. This topic has had its share of controversy and I propose that a separate article be devoted to it in a future issue •

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