# The Cockatiel Connection

# Establishing a Cockatiel Aviary

by Linda S. Rubin AFA Contributing Editor on Cockatiels

The cockatiel has long been a favorite pet, exhibition, and aviary bird, frequently reproducing when other psittacines will not. Generally hardy in aviary life, cockatiels come in an ever-growing number of both subtle and eye-catching color mutations, and handfed young can make ideal pets.

Generally sweet and docile, cockatiels should never be housed with larger, or more aggressive birds, since they seldom adequately defend themselves. Even smaller, more quarrelsome species such as budgies, some varieties of lovebirds and certain finches, especially in mated pairs or flocks, should be maintained separately from cockatiels. Such species, and other larger birds, could effectively monopolize feed and water dishes, preventing the less assertive cockatiel from obtaining adequate nutrition.

Should the cockatiel find itself forced further down the established pecking order by other species, and increasingly denied adequate food and water, such continuous abuse could lead to malnutrition, dehydration, and a lessening of resistance to disease. Additionally, the constant stress from fighting over territory within a pen or aviary could impose further stress-related disease, in addition to the more obvious risk of injury, and even death. Although the major factor in such situations is usually the height, and especially the length of the flight, providing enough space for cockatiels to escape bothersome individuals, even the most spacious of aviaries may not be adequate to deter known, or suspected, aggressors.

## Housing Small Collections

Generally, most fanciers precede their larger collections with the acquisition of either a few pets, or pairs of cockatiels, kept in cages. This may be sufficient for a period of time until the numbers begin to grow, which is not difficult to achieve if one is captivated by the variety of color mutations, or should one begin

to successfully raise a few clutches of young.

Standard cockatiel cages are quite suitable for one or two pet birds who are routinely allowed out of cages for daily exercise to enhance their chances of living a full life span. Of prime importance is to secure cages equipped with cockatiel bar-spacing, which will prevent a cockatiel from forcing its head between the vertical bars to become trapped, often with devastating consequences ranging from injury to death. The slightly closer bar-spacing on specially designed cockatiel cages prevents such tragedies. Additionally, an increased number of horizontal bars positioned along the vertical bars will allow a cockatiel to climb and effectively gain a secure foothold, again preventing fatal accidents.

The removal of the bottom grid, positioned just above the tray, will also eliminate worry over whether an inquisitive cockatiel may lodge its head between the grid spacing, as it retrieves items from the cage bottom, or even catch an open leg band on the grid, both of which have been known to happen. In general, brass, chrome, or similar materials which allow for adequate disinfecting practices should be sought out. Some plastics might be difficult to sterilize in hot temperatures, while older, painted cages could contain toxic lead paint, which can prove fatal if swallowed. Utmost consideration should be given to cages with more length, and not just height, since cockatiels fly back and forth, not up and down; and with enough space to allow each bird to comfortably stretch its wings and move around.

#### **Aviaries**

Once population starts to increase, large caging will become necessary. There are now a number of excellent manufacturers who offer modern, easy to assemble enclosures, requiring simple maintenance and upkeep. Many are on casters and can be wheeled effortlessly to any location, and may be dismantled and reassembled

should the need arise. Such pens may be stackable, or come in double or triple supporting frames, for fanciers with evergrowing collections. Custom cut doors, or self-cut side openings for nest boxes, may be easily accomplished with attention to blunting any jagged edges to the newly cut wire.

Another option is to build your own aviaries using clean, welded wire, or other safe materials. It is not unusual for breeders who have been raising birds for many years to go through a metamorphosis when designing their aviaries. The author evolved through many changes beginning with large, 11' long, walk-in flights, composed of 1/2"x1/2" welded wire mounted on wooden frames. Eventually, 6' long aviaries were installed, suspended off the floor by sturdy twelve gauge wire legs, with custom cut doors created for ease in servicing flights. In recent years, walk-in flights by Corners Limited were installed, which were also chosen for their ease in maintenance, servicing, and disinfecting, since all materials are nonporous.

As the cockatiel is a swift, strong flyer, it must be given adequate room to exercise and maintain general good health and condition. Therefore, as much space as possible should be afforded to pairs, especially to promote a lengthy, reproductive life. Due to their flying ability, emphasis should be placed on both the length, and height, of flights. While the depth of a flight need only be a minimum of 8', it is recommended to raise flights to at least 6' to 8' to help build chest muscle when birds fly upward, and perhaps 10' to 20' in length, if space is available. Although the author has kept cockatiels in pens only 6' long for the last several years, it has not appeared to be a deterrent to reproductive life, however, the birds would no doubt be happier in larger accommodations.

Materials should be selected carefully, with good disinfecting tactics kept in mind. For example, the author's original wood-framed, wire aviaries were eventu-

ally torn out in favor of all-wire and aluminum construction, as wood, being porous, could potentially harbor harmful bacterias, etc. Additionally, white pine chips used over the years were abandoned in favor of thoroughly dried, uncolored newspaper, merely for easy of use and increased frequency in cleaning measures. Certainly other materials such as cedar chips, the newer crushed walnut shells, or corn cob bedding can be used to line aviaries, however, the latter material must remain dry and free from moisture.

Popular wire size for aviary construction among many breeders typically varies from 1/2"x1/2", up to 1/2"x2" wire. It is highly recommended that doors be constructed low enough (e.g. 4' high), to prevent any swift flyers from darting out overhead whenever servicing such flights. Outside aviaries should ideally have an added corridor to trap any birds who might otherwise escape.

Natural tree branches of varying diameter should be installed in all cages, pens, and aviaries. The fluctuating sizes will afford some exercise to the feet, preventing sores and callouses, however, such diameters should still be selected with the species natural grip in mind. The bark, when stripped by the birds, will provide added minerals to the diet, act as a stimulus to the breeding cycle while satisfying a natural urge to chew, and generally provides some satisfaction and amusement to nesting birds. Popular varieties include apple, willow, eucalyptus, and maple. Cherry wood, in particular, should be avoided as it is known to be toxic to birds. All branches should be thoroughly cleaned and disinfected before installed, and selected from sites known to be free of pesticides.

## **Breeding Pens and Nest Boxes**

Cockatiels reproduce quite well in pens measuring as little at 4' in length, by 2-1/2' high, and 2' deep, providing pairs are rested in larger accommodations following the breeding season. Although some fanciers have had success utilizing even smaller enclosures, increased problems such as feather-picking, squabbling over space etc. can result. If one has the space, individual flights should be provided, ideally with one pair per flight for optimum results.

In nest box design, many fanciers still prefer to utilize a 12" square box, although certainly smaller sizes can be used. The advantage of a larger box is more space when raising young, especially if five or six chicks hatch to share such space with their parents. Both cocks and hens share the duties of incubation. feeding, and sitting the chicks. In pairs with especially strong bonds, cocks and hens may sit simultaneously, especially through the night. However, larger boxes can be a severe disadvantage, especially if eggs or very young chicks should roll away or wander off. This is especially risky with very young, or virgin hens, who are not yet experienced enough to retrieve such losses. A 2-1/2" to 3" nest entrance hole, large enough for exhibition size stock, is usually accepted by most pairs.

Although there are some fanciers who prefer to use concave nestblocks within the nest, boxes need not come equipped with such extras. Often times, cockatiels proceed quite nicely with just a level floor, perhaps with the addition of an inch or so of wood shavings. Those birds who object to such additions, will usually eliminate the shavings on their own, and proceed without any delay to laying a round of eggs. Although many breeders utilize either white pine and cedar chips or shavings as the floor cover in aviaries and pens, some fanciers feel it may be risky to expose very young chicks to the resin from cedar shavings while in the nest box, while others feel cedar aids in keeping the boxes dry and sweet smell-

Boxes should be thoroughly disinfected at the conclusion of the breeding season and stored in a cool, dry area. This is more easily accomplished with plastic or other easy to clean materials. Breeders utilizing the traditional plywood, pine, or other wooden boxes, should consider

replacing them at the end of the season, as wood is porous, and cannot be completely disinfected.

As a general rule, no more than two full clutches, or 10 chicks total, should be allowed per pair, per breeding season. The conclusion of the breeding cycle should be followed by a minimum of three to six months break in a resting flight. Encouraging further nesting will only overburden pairs in the long run, exhausting, or prematurely limiting their reproductive life span. Such exceptions might include pulling young for handfeeding, or fostering out eggs to other pairs. However, an enormous amount of energy and nutrition go into forming each individual egg, and birds should not be purposely overtaxed.

# Indoor Versus Outdoor Breeding

The decision to erect flights indoors, or build outside aviaries, is dependent upon a number of factors, not least of all geography and zoning regulations. If one is fortunate enough to reside in friendlier climates, the inclination is to erect outdoor aviaries, however, many cockatiel breeders have successfully produced superb individuals from well-run indoor studs. The aviculturist must weigh the pros and cons of indoor, versus outdoor breeding, and decide on a personal basis which style is more attractive.

Disadvantages to outdoor aviaries include: exposure to inclement weather and storms; vulnerability to predators (generally requiring concrete slab floors to keep predators out); possible susceptibility to disease from outdoor wild birds; exposure to parasites (requiring regular worming treatments); the increased risk of group alarm calls panicking the flock (with the possible need of installing safety netting to prevent accidents from swift







Some of the author's earlier all-wire flights, utilized for all psittacines during the 1980's. Flights measured 4'H x 3'W x 6'D, raised 2-1/2' off the ground on wire legs.

flyers in overly long flights); and increased possibility of outdoor escape.

Advantages to outdoor aviaries include: easier maintenance and cleaning; exposure to fresh air eliminating the need for air purifiers and cleaners to remove feather dust, dander, and harmful organisms; improved feather condition from exposure to outdoor rains; direct exposure to sunlight and the absorption of necessary vitamin D3; and possibly the

Some of the author's cockatiels seen from inside one of the raised flights. Note the young male Plumhead Parakeet still acquiring his tail feathers, in upper left forground.

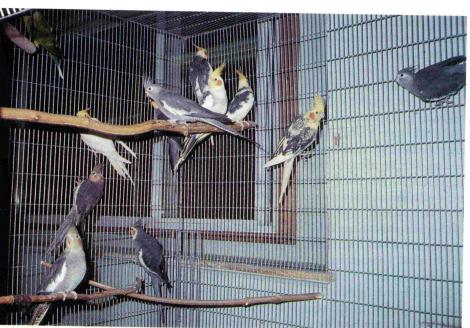
The author's aviaries suitable for New England indoor basement breeding. The walk-in flights each measure 6'H x 2-1/2'W x 6"D; low doors prevent birds from flying out overhead. The single Lutino Indian Ringneck hen has been accepted by the cockatiels as part of the flock Each unit in the double breeder measures 2'H x 4 W x 2D; single units in the triple pen each measure 20"H x 38"W x 20"D. Breeder units are on casters and are easily moved for clean-

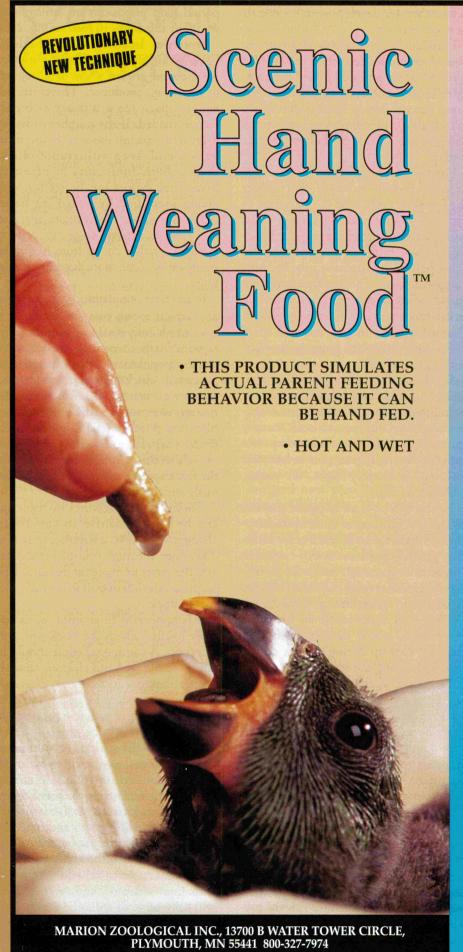
provisions of more spacious aviaries.

Disadvantages to indoor aviaries include: increased daily maintenance cleaning; the need for air purifiers, air cleaners and possible humidifiers; the need to provide vitamin supplementation containing vitamin D3 (in correct proportion to vitamin A, calcium and phosphorus); the need to spray mist birds; the possibility of overcrowding in limited quarters with the increased risk of contagious illness being transmitted; plus aviary size is directly dependent upon space available.

Advantages to indoor aviaries include: secure shelter from the elements; protection from both predators and outdoor wild birds carrying disease; protection from outdoor parasites; control over environmental conditions including temperature, humidity, and photo-light period, with the ability to extend the breeding season; plus possible increased protection against theft and fewer escapes of aviary residents to the outdoors

Individual Versus Colony Breeding If one is interested in producing a quantity of young during the breeding





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season, and is not concerned with producing superior quality, or specific color mutations, colony breeding is a method of producing an abundance of offspring. Cockatiels, especially once experienced, are generally good parents and will take care of their own, and on occasion, even other pairs' young. Eager parents, both cocks and hens, have been known to dive into their own, or a neighbor's nest box, to satisfy the cries of hungry chicks who have been left temporarily unattended.

To plan a successful colony, it is recommended to expose birds to prospective mates prior to the breeding season, in order to enhance the formation of a bond, or else extra time must be allowed upon introduction at the start of the season. Any extra birds which remain unmated, should be removed in order to maintain harmony within the group. Although many pairs do form bonds with a single mate, it is not unusual for a chance indiscretion to occur, and so pedigrees cannot be absolutely guaranteed, even if the breeder is convinced of a pair's faithfulness. Care should be taken not to overcrowd a colony flight, and to consider the number of young which will share the accommodations, once fledged.

A number of extra nest boxes should be offered beyond the number of pairs housed, so that fighting over boxes will be kept to a minimum. If boxes are attached inside, it is not unusual for pairs to copulate standing on top of the boxes, or occasionally on other flat surfaces. Boxes attached from outside have the advantage of providing easy nest inspection without disruption to the colony. Nest boxes should be removed after two rounds of young are produced (or approximately 10 chicks per pair), or continuous breeding, and egg production, will ultimately drain and tax the pairs. Additionally, the young chicks may be stimulated to reproduce much earlier

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than they should and attempt nesting before they are developmentally able to be good parents.

Individual cage breeding, one pair per pen, is recommended when the breeder is intent upon producing the best quality of birds possible; when attempting to breed for exhibition, and is absolutely mandatory if needing to guarantee the pedigree and parentage of offspring produced.

Further advantages to individual cage breeding include increased control over the breeding cycle, and the gathering of vital information and data on individual pairs. Accurate record keeping, the banding of young from known parentage, and other helpful information may be more easily collected. The obvious drawback to individual cage breeding is the increase in maintenance time in servicing the additional aviaries in use, and the space necessary in which to house such aviaries.

While smaller collections using controlled breeding may permanently house established pairs, the majority of breeders with any number of birds usually resort to flocking their cockatiels in two separate resting flights, plus at least one holding, or nursery flight, for young, unflighted birds.

In the U.S. it is an accepted practice to separate the sexes of adult birds, keeping one flight for hens, and one for cocks. The general consensus is that cockatiels exhibit strong enough bonds for pairs to refuse any other mate than their bonded counterpart. Therefore, in order to encourage an individual to be more receptive to a new partner, established pairs are split up during the resting season, by housing the sexes separately.

Of course, when such proven, producing pairs are reunited, they quickly go back to nest. However, should a new mate be selected (e.g. to produce a different mutation, start a new line, or improve upon show qualities), it is easier to foster a new bond if the original mate is not accessible. However, in some instances, pairs can bond for life, and birds will not accept any other partner while the original mate is within sight. or earshot of its call. In general however, many cockatiels will pair with a new partner, and produce eggs within two to three weeks of introduction and with the provision of an adequate nesting site, increased food supply, and other environmental stimulus (e.g. increased temperature, humidity, and photolight period, and provisions of "milky-stage seeds" or soft foods to feed young, etc.)

#### Nurseries, Isolation and Schedules

Many breeders of cockatiels plan on handfeeding at least a few, or a majority of offspring, produced. Therefore, adequate space for a nursery is highly recommended. If the number of babies is great, a separate room to house incubators and keep vulnerable chicks isolated from disease may be necessary. Several incubators can be set up, with chicks identified by coded leg bands grouped together according to age, size, and developmental stage, to prevent younger, smaller chicks from becoming trampled by older, more developed fledg-

In any large population, a separate area, or hospital room, may be necessary to isolate sick individuals, and prevent contagion from spreading through the healthy population, or to younger, lessprotected, chicks. Ideally, an area on a separate air system will help to quarantine any compromised individuals. If new birds are purchased and added to the flock, a separate quarantine area, again on a different air system from the rest of the flock and the nursery, should be seriously considered.

Cockatiels are creatures of habit and can be quite sensitive to any abrupt changes, or to new, or stressful, situations. Therefore, the more routine in their day, and the fewer unexpected disruptions or surprises, the less overall stress will be felt by the flock.

It is important to attempt to set up a daily routine which the flock will come to expect. A routing schedule should include regular feed and cleaning times by keepers familiar to the flock; plus daily morning inspections for health and safety checks, banding of young in the nest, and final evening checks before dark. A sensible photolight period, or number of daylight hours, may be aided by installing an automatic timer and dimmer, to indoor aviaries. During the breeding season, visitors can either be kept to a minimum, or limited to another room or area, if known to inhibit the security and productivity of producing pairs.

An adherence to schedules, freedom from known stresses, and a calm routine, will only serve to enhance the cockatiel breeding stud, and in turn, the birds will thrive and produce in a contented, productive environment.