

Maintaining zebra finches

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These notes are meant to complement
Proper Care, Husbandry, and Breeding Guidelines for the Zebra Finch, *Taeniopygia guttata*
Christopher R. Olson, Morgan Wirthlin, Peter V. Lovell, and Claudio V. Mello

A cage 18" X 18" X 24" is good for one breeding pair of zebra finches or a small group of immature birds. If space is at a premium, an 18" X 18" X 18" cage will suffice. A flight cage or aviary does reduce labor, but in a colony birds might get less exercise than when kept in an individual cage. Those housed privately can fly back and forth all day without any worries over aggression. In a flight, birds often stick to one spot so to defend their little "turf." Pecking order pressures inevitably wear down the low little gals and guys on the totem pole. For those housed in a flight, reproductive odds will be tilted in favor of the winners of gang warfare. These birds are not necessarily suited for other purpose, like being good parents or easy to handle. Some other drawbacks of group housing are that there's no way to determine parentage and all the birds need to be disturbed whenever one is to be handled. Do place multiple feeding and watering stations in a flight. This way, if a bully decides to monopolize one source of food or water, the rest of the flock won't suffer.

For larger and wild birds like starlings, Melissa Bateson and Gesa Feenders are definitely correct that small cages are stressful and that aviaries are called for.

https://www.staff.ncl.ac.uk/melissa.bateson/Bateson_Feenders_2010.pdf

This is not so for small and now domesticated ones like zebra finches.

For a short term or otherwise limited project, commercially available canary breeding cages are perfectly serviceable. If resources allow, constructing custom cages out of 1" X 1/2" welded wire mesh (16 gauge, galvanized before welding) and j-clips will be better. The welded wire is purchased in 100 ft, rolls of 18" width. Three sections are cut for each cage: 2, 24 X 18" and one, 84" X 18". The long piece is bent at three right angles – 18", 24", and 18". The edges are fastened together with j-clips to form two sides of 18" X 18" and a front and back, both 24" X 18". The original two 24" x 18" pieces are then attached with j-clips to form a front top and bottom. This gives a 18" X 18" X 24" box. Holes are then cut for the door, nest box hole, and feed dishes (grit, seed and soft food). The cages can be painted using a roller with black polyurethane paint. This is not necessary, but vastly improved visibility is the result. Painting, of course, needs to be done in a well-ventilated area far removed from the birds. These cages can be attached with u-bolts to 4 pieces of 3/4" electrical conduit pipe acting as supports / legs. Debris falls through the wire bottom. As a hand does not have to enter the cage for daily maintenance, the birds' territory is not invaded.

Pans for cage sanitation can be constructed of sheet metal. As an alternative, a flat piece of sheet metal is placed on the top of one cage, facing the bottom of the one over it. Then, paper or a layer of plastic film is put over the sheet metal. To clean the cage, the paper or plastic is simply discarded and replaced.

As birds don't like having constantly to look over their shoulders to see if something unpleasant is approaching from behind, cages should be placed along a wall. If a stack of cages has to be installed in the middle of a room, to give a sense of security, bolt a piece of sheet metal to the back frame.

Perches are made of $\frac{1}{2}$ by $\frac{1}{2}$, square, "baluster" board, available at any good lumberyard. With round dowel sticks, scrape them a bit with a hack saw blade, to make the surface rough. The smooth, polished surface is very exhausting for the birds. It's good to supply a variety of perch sizes and shapes, from $\frac{1}{4}$ inch to $\frac{1}{2}$ inch. Perches must be clean. At least once a month, either replace the perch, or scrub it with hot water, bleach, and pine oil. Make sure that it is dry before you put it back in the cage.

I found wooden nest boxes to be a sanitation nightmare. I constructed instead 5" cubes out of 1" X $\frac{1}{2}$ " welded wire mesh (16 gauge, galvanized before welding) and j-clips. The back end has clips just on the top side and so acts as a door. I covered the wire mesh framework with cardboard, using twist ties to hold that material in place. The cardboard can be quickly removed and replaced as required. Between uses, the wire mesh nest frame is easy to wash. If funding is available, an optimal solution is to have custom nest boxes constructed from sheet metal in the form of a little drawer, The nest is bolted firmly to the front of the cage. This way, the nest box opening is not exposed to view. A handful of pine shavings placed in the nest box gives the birds a soft clean surface to start with.

Fine dry grass is a very good nest material, but strips of paper or threads from burlap sacks also work well. If your office shredder yields fine strips, the easiest thing to do is to feed in a blank sheet of paper or two. Don't use threads as these may wrap about the bird's toes and legs, cutting off the circulation. If not discovered quickly, gangrene will set in resulting in the loss of toes and limbs, if not death. Zebra Finches often build "sandwich" nests by placing material on top of the eggs. Deprived of contact and thus warmth, these eggs will never hatch. In this situation, remove the redundant material and don't give the birds any more.

Birds can contaminate open fountain drinkers or water dishes. With the fountains, if the birds place nesting material or a feather in the drinker, all the water can wick out. Gravity water bottles (as used for mice) are much, much better. Ones designed for birds, with a ball bearing end, are available. Edstrom automatic drinkers are even better yet. With either system, finches require something of a training period. The birds given the new dispensers and the usual waterers are at first left off for an hour or so, with the time increased each day. Once the birds are observed using the new system, dishes or fountains are no longer provided. In a flight, generally one bird gets the idea quickly and the others follow the leader. Water bottles or fountains, at the very least, need to be rinsed out every day. An improvement is to have a duplicate washed set of waterers that can be refilled for use each day. As the Edstrom system connects to the plumbing, no maintenance, changing or cleaning is required.

In a gravity, "silo" food dispenser, finches are able to pick out their favorite seeds. When one particular delicacy is sought -- or just out of exuberance or boredom -- a bird might empty the entire unit. If that's onto the floor of the cage, the seed is soiled. If the cage has a wire bottom, the bird might starve. Seed should be served each day in a deep dish that holds a little over a daily ration. Feeding small seed eating birds requires good judgment. With their very high metabolism, zebra finches can quickly starve. At the same time, the birds will waste seed that's not properly portioned.

Offer the birds a finch mix composed just of seed. Avoid products that claim to be fortified with -- perhaps mythical -- vitamins or that contain kibbles or powders that defy identification. I've seen these "extras" prepared from refuse. Buy bird food from a supplier with a quick turnover. Store the seed, preferably in a metal bin, in a cool dry location that's safe from rodents. Only purchase what will be used in a reasonable amount of time. In a warm environment, insects infest the feed. Though they do no direct harm to the birds, these pests degrade and contaminate food.

Using an avian insecticide that contains a .05% solution of pyrethrin as the active ingredient, once a week spray the birds, cages, and surrounding area (preferably with open dishes removed) from a distance of eighteen inches. This will control lice and mites (both feather and air sac). Roaches and flies also will be kept in check. The solution may be dispensed by means of a hand held mister. A stronger mixture, .1% pyrethrin, may be applied to the floors and walls of the room, especially cracks and crevices, but not directly on the birds. If roaches and flies are not a concern, it's also possible to dose the birds with Ivermectin and so eliminate vermin.

Chicken egg (hard-boiled or scrambled) is the standard protein supplement / nestling food for seed eating birds. I am concerned about the rising risk of poultry disease, but now can't suggest using something else. No matter what, preparing hard boiled eggs is a bother. I hope to test feeding tofu or some other easily obtained plant source of protein that requires low / no cooking. It's good to grate the egg in a blender or food processor with whole grain bread and a little fresh carrot

Good ventilation in the bird room is very important. Bird dust not only is unsightly, it's also dangerous. Inhaling organic material is a hazard to human health and can result in hypersensitivity pneumonitis.

<http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001168/>

And if avian dust makes people sick, it's certainly bad for the birds, too. I've used electronic air cleaners, but the resulting ozone might also be a problem. A particulate filter is quite likely better, but would need to be regularly cleaned. In any case, face masks should be worn while cleaning the cages or whenever spending a lot of time in the bird room.

Zebra finches should not be housed near pigeons or poultry as these birds serve as reservoirs of disease. Avian malaria has been shown to be detrimental to canary song.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1559907/>

Zebra finches from unknown sources might be infected with *Coccidia*, in addition to bacteria or fungus.

<http://www.ncbi.nlm.nih.gov/pubmed/2166869>

It would seem best that birds used in vocalization research are raised under controlled conditions. Zebra finches sold for the pet trade might be infected with parasites, be past-prime (if not geriatric), have exhibited bad traits (e.g. poor parents) or even known to be sick.

Have a low wattage bulb – perhaps red -- go on in the bird room a half hour or so before the main lights go off, The dim light should remain on through the night and go off after the overheads resume in the morning. This will give the birds a “dusk” to alert them to the approach of “night.” It also allows a brooding hen caught off the nest a little light to find her way back home.

Store out of sight of the birds any carriers, nets, or gloves used in handling the zebra finches. When it is necessary to remove birds from the cage, wear some particular and distinctive hat or jacket. This way, the finches will not need to worry every time they see you. The birds will only tense when the “predator” – the unusual garment – appears.

Increased humidity is believed to promote breeding activity and to make the egg shell easier for the chick to crack. If it's not possible to allow the birds to bath frequently and the bird room is warm, then mist the birds with water from a hand sprayer.