



This Issue

First, a wonderful holiday season to each of you — and don't forget to feed that seasonal partridge in the pear tree. Do take care of your birds — but take time out to enjoy the season, too.

This issue's theme is "Birds That Pay Their Own Way, and More" — sometimes referred to as "Bread & Butter Birds," a term I don't much like. Certain species seem to breed easily and are easy to sell. They include some finches, Cockatiels (read the story by nine-year-old Sam Gillis who really wrote the thing *herself*, page 30), lovebirds, parrotlets, and, strange to say, aracarís (Jerry Jennings worked this one out, see page 44). Sometimes we overlook these relatively common birds that are the ones paying for the seed to raise more difficult and undependable species.

And, in case you don't have any of these little money-makers, there is a helpful article on how to feed your birds well without spending a fortune — think pumpkins. See page 43.

We also have a very important "Special Report" telling you more about the critically endangered Spix's Macaw than you ever read before. See page 46 to get the true and accurate version of this extraordinary conservation effort — one in which captive breeding is crucial — an effort we should *all* support. It is a touching and inspiring story.

There are a couple of "odd birds" in this issue. Joseph Forshaw has Banded Lapwings in his aviaries (pg. 20) and Glen Holland tells how the future of a highly endangered snipe is dependent upon captive breeding (pg. 29). And here we meet "The Next Generation," two youngsters who are seriously involved in aviculture, Sam Gillis and Clay Edwards. They *are* the future of aviculture. Were are the others?

You'll find here the Scarlet Macaw, Hawk-headed Parrots, Jardine's Parrot, starlings and mynas and, of all things — your birds as an insurance liability.

Read and enjoy.

Sheldon Dingle, Editor

Breeding Zebra Finches

by Myra Markley, Cedar Rapids, Iowa

The same scenario happens to people all over the world just as it happened to me.

Walking into a pet store and seeing those active, colorful, beeping, finches flittering about in a display cage can mean love at first sight. I knew right away that I wanted to own one of these colorful little birds, but like any good bird enthusiast, I bought a book on basic care before buying my first

Zebra Finch. Owning only one was great, but I soon decided that I would like to breed them.

Proper Diet

Zebra Finches can live on finch seed mix alone but it is better to offer your finches a more varied diet. I like to add millet, fresh fruits, and egg to my birds' diet. Fruits like sliced apples, oranges, grapes, melon, and other colorful foods add important nutrients to the finch



A Pair of white variety Zebra Finches.

Photo by Dan Martin

diet. I also chop hard-boiled eggs (shell and all) for my birds every few weeks. Fresh fruits and eggs spoil rather quickly in the open air so they should be removed after a few hours.

While raising their young, Zebra Finches not only are feeding themselves but up to six other birds that require ever-increasing amounts of food as they grow. One must provide the working parents a good variety of extra food and make sure that they always have clean water. Vitamin supplements work very well along with a balanced diet to ensure the health of your birds and their offspring.

A few serious health problems can be avoided by providing a good diet. Female Zebra Finches can become egg-bound or calcium deficient if they do not get enough calcium-rich foods in their diet. Both health problems can be fatal if not treated right away. Consult your avian veterinarian for proper treatment protocol. Various other ailments can be caused by insufficient protein, calcium, and/or vitamins and minerals.

Finding a "Pair"

Zebra Finches are easy to sex. Males can be visually distinguished from females. Male Zebra Finches have a black breast bar, chestnut flanks speckled with white, orange cheek patches, a scale-like pattern under the chin and, of course, the red beak. Females on the other hand are totally lacking in any of these male markings and their beaks are a lighter and more orange color.

There are Zebra Finch color mutations that have less-defined sex markings, so if you really cannot see any distinguishing markings on your bird, look at the beak color. In all but one Zebra Finch color mutation, the beak colors will still be red or orange, depending on sex.

Building a Home

Having a cage that is large enough for only two birds is fine if you do not plan to breed, but once you start breeding Zebra Finches, you soon will have not two, but three to six and eventually many more. Your breeding cage must be large enough to accommodate your breeders and their babies

without crowding.

An adequately sized breeding cage is approximately 2 feet L x 1 foot W x 8 inches H, but giving a pair more space is even better. Zebra Finches can breed in small cages, but I do not recommend it. They need exercise to stay fit and healthy. Cramped caging can create many problems. Cage length and width are more important than the height of the cage because of the birds' natural flight pattern.

Next, the pair will need a place to lay, incubate, and hatch their eggs. There are several types and sizes of Finch nests available. Many people use the bamboo woven nests. I use them because they are inexpensive and I can buy them at any pet store that sells birds. The bamboo nests come in two sizes, regular and large. Both work well but the larger ones are best for birds that tend to produce large clutches.

Another popular nest is the wooden nest box. They can be mounted inside or outside of the cage. (If mounted outside the cage, an opening in the cage will allow the birds to get to the nest box). These nests are easy to clean and make it very easy to count eggs and check on the chicks as they grow.

People do not always agree on what type of nesting material is best for birds. Zebra Finches are not particular—if they can lift it, they will use it in the building of their nest.

I like to give my Zebra Finches small strands of burlap and shredded Kleenex tissue to use for nesting material. It is important to make sure that what you give them is not so fine that they can get it tangled around their legs or around the chicks. Birds can

die if they become badly entangled in the nesting material.

We Have Eggs!

Eggs usually are laid at the rate of one per day. Incubation starts after the last egg is laid, and the eggs start hatching about 13 days later. Zebra Finches can lay between one and eight eggs, but most nests have between two and five eggs on average. The female does most of the incubating but the male will also take his turn on the eggs to give the female a chance to stretch, eat, and drink.

If the eggs are fertile, they will turn a darker color after the first week. If you cannot tell whether or not they are fertile by looking at the eggs, you can candle them. Candling eggs is really pretty simple but if you are very nervous about it, do not attempt it. To candle an egg all you need is a pen light or a small flashlight. Put the light behind the egg and look for small red veins inside the egg. You may also see the tiny embryo's heart beating which will look like a small red dot rapidly pulsating within a larger red area. If the egg is a week old the entire contents of the interior of the egg might appear red, and by this time, you probably will not be able to distinguish the actual embryo.

Handling the eggs is safe if you wash your hands first and do not handle them a lot. The oil from human fingers can clog the tiny pores in the shell that the chick needs for the exchange of air. I try to candle eggs only once if at all. If there is room in the nest, you can hold the small light gently against the shell for a brief period to look for signs of

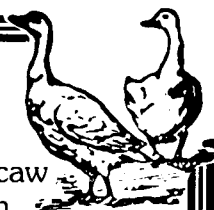
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* Position open: contact regional vice president if interested.

** indicates 2 year term has been fulfilled. If no new interested party comes forward and indicates a desire to serve, incumbent remains in position.

For information about contacting any of these member clubs, please call that club's state coordinator.

life. This method does not require that you handle the eggs at all.

Sometimes new parent birds will abandon their nest or accidentally cover the eggs with more nesting material and start over again. Removing the extra nesting material that you provided them as soon as the first egg is laid will help keep new parents focused on their duties.

Baby Zebra Finches

Zebra Finch babies are about an inch in length when they hatch, and their coloring is pink with a few white downy feathers. Around three days of age they start making audible noise that is something like a "ff ff" sound, but it is a very soft and some people do not hear it until day four or five. The babies will make a little more noise with each passing day. If for some reason the parents do not feed the chicks they will die at day three when what is left of the yolk sac is used up. Some inexperienced Zebra Finch parents do not care for their young properly after they hatch. The pair should be allowed to rest and then try again.

Stages of Development

"Nestling" is the term used for a baby finch that is over a week of age. During this phase their parents must really work hard keeping them fed and warm as they rapidly grow. I give my parent birds extra seed, millet, fruits, and egg to help them keep up with the demands of the chicks and to maintain their own health.

Once the babies take that first bold leap from the nest, they have reached the "fledgling" stage. The chicks are still very dependent on their parents' care and feeding while they start to explore the outside world. Millet and soft foods are very important for the chicks as they learn to eat on their own. Weaning will take place a few weeks after they fledge but the chicks will not be fully independent for another few weeks.

Independence from their parents marks the "juvenile" stage. By now they will be eating on their own and soon will go through their first molt. After their first molt the sexes will be very apparent. Males will start showing

the traditional male colors as the beak turns red and the females beak will turn orange.

By six months of age, both sexes will be ready for breeding. Males do mature earlier than females but breeding young males is sometimes problematic. Young males may toss eggs or chicks from the nest in their excitement. If a young female begins breeding too young, she can become egg-bound and die.

After the chicks are raised and on their own, the parent birds may try to start the whole process over again right away. Some Zebra Finches will continue breeding as long as you will allow it, as it is their instinct to do so. The caregiver must intervene to force them to rest. Raising clutch after clutch is very hard on the parents and can severely weaken them and cause illness. After each clutch they need a few months of rest. Removing the nest and all nesting material will stop the raising of babies but the female may continue to lay eggs.

Breeding for Extra Income

Making a profit may not be possible unless you have many birds and enough customers for your babies. Selling babies to cover the cost of bird food when you have only one or two breeding pairs is a more realistic goal.

I breed Zebras and several of their color mutations because I enjoy the birds. I love to watch them build their nests just perfectly and raise their babies. I do not mass produce Zebra Finches, but I do breed some color mutations for exhibition in bird shows. I sell the ones that are not show quality at bird fairs and a few pet stores, as well as to nursing homes. Whether you raise birds for your own enjoyment or to make a modest profit, raising Zebra Finches can be a most enjoyable way to observe one of Nature's most active and colorful of feathered creatures. ➤

Myra Markley is an avid finch enthusiasts and breeds several Zebra Finch mutations. She has written several pages about finches and breeding finches on her website at < <http://www.seffera.net> >. She also designs and hosts a variety of internet sites, including the First Internet Bird Club at < <http://www.bird-club.org/> >.