Problems With Finches

by Robert G. Black
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Bird fanciers have maintained many species of finches in captivity now for over a hundred years. One of the classic books of aviculture, *Foreign Finches in Captivity* by A.G. Butler, covered many varieties of finches that were common in his time and are still common in cages and aviaries today. The problems that breeders encountered before the turn of the century are the same as those that today's fanciers face. The result of this relative difficulty in maintaining finches in good health has given them a reputation over the years as a group of very touchy and sensitive creatures, prone to die at the drop of a hat for no apparent reason.

Finches, however, do not simply die or fail to breed for no reason. Though the cause of any problem may be difficult to trace, a cause surely does exist. The ability to eliminate the causes of problems with their finches is what distinguishes the successful fanciers from the unsuccessful ones. A little more knowledge of finches and their needs will mean more success in the future for all finch fanciers and breeders.

With their very small bodies and extremely active lives, all finches have both a very high body temperature and a very high rate of metabolism. A finch must eat a substantial portion of its body weight every day just to remain alive and active. No human could possibly eat this amount of food in relation to body size in a day and would have no need for it. Thus, there can be no greater insult than to say that someone eats like a bird.

As the avian species increase in size, the percentage of food consumed in relation to body weight decreases. For example, a cordon bleu finch may have to eat 50% of its body weight every day in food for normal maintenance, but a much larger bullfinch will need to consume only 25% of its body weight in food each day. These percentages are only approximate, of course, and will vary widely with the temperature, amount of exercise, and quality of the food consumed. The food consumption also will increase dramatically while a pair of finches are feeding a nest of growing young.

This high rate of food consumption and metabolism means that finches must have a diet that is complete in all required nutrients. Any deficiency will become obvious through illness, listlessness, puffiness, and death within a matter of days or weeks. A similar deficieny in a larger bird might not become obvious for months, and a human being might go for years without obvious symptoms.

A finch's incessant activity and high body temperature, often as high as 110°F., wear out body cells in a hurry. This requires a steady supply of complete protein in the diet for rebuilding these cells as necessary, plus all of the vitamins and minerals required for the proper utilization of the protein. A seed diet alone will never supply all of these needed nutrients. The high protein requirement must come from natural foods such as insects, hard-boiled eggs, and worms, or from commercially prepared foods such as crumbled monkey chow, dog food, game bird starter, or turkey starter. Any of these foods in addition to the seed diet will contain the protein necessary for both maintenance and breeding, as well as all necessary vitamins and minerals that may be missing or deficient in the seed.

Such additional foods as greens, cuttlebone, sweet corn, fruit, and shelled nuts are always valuable additions to the diet, but they are not essentials. The high protein items are essential. At least one of them must be included in any diet for finches. Once the finches are eating a high protein food in adequate quantity, at least half of the common problems encountered in handling finches will be eliminated.

With this background in mind, let's look at some of the specific problems that are so common in the maintenance of finches, along with their simplest solutions. One of the commonest of these is the early loss of adult finches through death after a period of puffiness, illness, diarrhea, and loss of weight. Many breeders have referred to this condition as "going light." There are two primary causes for this problem.

The first possible cause is proliferation in the digestive tract of some type of harmful bacteria to which the finch

has no resistance. In this problem, diarrhea will be very evident, and speed of treatment is essential. A finch has such a limited amount of body reserves that once the digestive system closes down and diarrhea begins, death is only a couple of days away. The loss of weight is rapid as the finch's body breaks down muscle tissues for energy, once all carbohydrate and fat reserves have been used.

The logical treatment is to neutralize or kill the harmful bacteria that are causing the problem. Antibiotics are virtually useless unless you know which types of bacteria are the infecting agents. You have no time to do test cultures with finches that are sick. The birds will be dead long before the bacteria are positively identified and a suitable antibiotic is prescribed. The most effective method is simply to mix one drop of chlorine bleach to each ounce of the finches' drinking water. As they drink this, the treated water will kill all harmful bacteria in the digestive tract and will allow the birds' digestive systems to get back to normal. Obviously, this problem will be more unusual in cities that heavily chlorinate the drinking water.

The second cause of puffiness and loss of weight is nutritional deficiency. The deficiency may be of complete protein, or it may be of some other nutrient, but the effect will be the same. As the body attempts to make vital cell repairs and finds insufficient nutrients in the blood for the job, it begins breaking down muscle tissue to supply the nutrients necessary for more vital body organs and functions. This process cannot go on for long before the finch dies.

Any of the high protein foods listed previously will supply the nutrients necessary for a return to full health. It must be understood that any food that is not eaten will not do a finch the slightest bit of good. You must be certain that your finches are eating the items that you offer in their diet.

Another problem that ties in closely with this adult illness and loss of weight is the death of nestlings and fledglings at any point from hatching to independence. A particularly dangerous time is the pinfeather stage of growth. At this point both the feather growth and body growth require a large amount of complete protein. The requirement for protein at this stage of growth is constant and is the highest it will ever be in the life of the bird. A failure in the supply of complete protein during this critical growth period will result in death. Often, the nestlings will die with full

crops and from no apparent cause.

Bacterial contamination also will cause the death of both nestlings and fledglings. This can occur at any time from hatching until the fledglings become independent. These youngsters have not had the time to build up an immunity to the harmful bacteria in their environment. As a result, any potentially dangerous bacteria that the parent finches ingest and feed to the young ones are likely to cause a severe upset to the digestive system and the rapid death of the young. The chlorine water treatment recommended for adults will end the bacterial problem in the nestlings, also. Cages and aviaries should be cleaned and disinfected, of course, to keep the finches' surroundings from becoming a continuing source of reinfection.

A number of other problems are common in the maintenance and breeding of finches. One of the most serious and most misunderstood of these is the

Photos by John L. Krell, Garden Grove, CA

This pure white baby zebra finch is not an albino (note the black eye) but is a fixed white mutation that is quite striking.

Two fledgling zebra finches of the normal color phase. The young zebras resemble the female but with a more brownish tinge.

1984
A.F.A. Convention Speakers

AVIAN MEDICINE

"Avian Microbiology; Is It Practical for the Aviculturist?" by **LYNNE DREWES** - Medical Technologist for Aviculture Institute.

"Papova Virus Infections in Psittacines" by **SUSAN CLUBB, DVM** - One of the most active veterinarians in the U.S. working for the advancement of exotic birds. She is the Staff Veterinarian for Pet Farm Inc.

"Disease Prevention and Use of Disinfectants" by **KEVEN FLAMMER, DVM** - Staff Veterinarian for the Aviculture Institute and Behavioral Study of Birds.

"Cockatoo Feather Loss Syndrome" by **ELLIOTT JACOBSON, DVM** - Assistant Professor, Laboratory Animal and Wildlife Medicine, College of Veterinary Medicine, University of Florida.

"Pest Control in the Aviary — Busch Garden's Experiences" by **JOHN OLSEN, DVM** - Staff Veterinarian for Busch Gardens, Tampa, Florida.

"The Breeding of African Passerines and Softbills" by **DAVID RUSSELL, DVM** - Specialist in avian medicine in South Africa and a well-known aviculturist. Received 1st breeding awards for Sun Conure, Hahns Macaw, Iris Lorikeet, Little Lorikeet, Dusky Lorikeet, Goldie Lorikeet and Stella's Lorikeet from the S.A.N.C.B.A.

BUDGERIGARS

"Budgerigars in the '80s", "Exhibiting and Breeding of Budgerigars" and "Colours and Faults in Modern Budgerigars" by **ERIC PEAKE** - Noted British Budgie breeder and artist. Art work will be on display and for sale in the Exhibit Hall.

COCKATIELS

"Hand-Feeding Cockatiels" by **DEE DEE & TOM SQUYRES** - Breeders of champion cockatiels and budgerigars; co-founders of the American Cockatiel Society.

"Cockatiel Mutations" and "ACS Show Standards of Perfection" by **BERT McAULAY**

LOVEBIRDS

"Show Standards of the African Lovebirds" and "Progress with the Fischer's Lovebird, including New Mutations" by **LEE HORTON** - Founder and a past President of the African Love Bird Society.

FINCHES & SOFTBILLS

"Husbandry Techniques for Estrildid Finches in Cage & Aviary" and "Captive Management and Propagation of Ramphastids (Toucans)" by **JERRY JENNINGS** - AFA's first President; a noted aviculturist with remarkable breeding successes with Australian finches and some of the more delicate African species; also has the most comprehensive collection of Toucans in the world.

"Are Softbills the Passenger Pigeon of Aviculture?" by **LARRY SHELTON** - Curator of Birds at Philadelphia Zoological Garden; chairman of AFA's Bird Census.

PSITTACINES

"Successful Hand Feeding Techniques of Baby Psittacines" by **LINDA BARBER** - Behavioral Study of Birds.

"Macaws" by **GILL duVENAGE** - Owns and operates Glenwoods Farm Aviaries in South Africa and specializes in Macaws, having nearly 250 established Macaws in the aviaries.

"Conure Husbandry" by **TOM IRELAND** - Immediate Past President of AFA. A well-known U.S. aviculturist who specializes in South American Psittacines and raises young from 18 species of Conures.

"Identification, Care & Breeding of the Forpus Parrotlets" by **DAVID KOFFRON** - Western Regional Vice President of AFA and active in the Arizona Aviculture Society. From his collection of approximately 80 parrotlets he is compiling information regarding the identification of this species of birds for future use by other aviculturists.

"Endangered Parrots" and "Breeding Small Lories" by **ROSEMARY LOW** - A well-known London aviculturist and author of a number of books on birds and bird keeping.

"Pacific Parrots in the Field and Aviary: the Kaka and Long- and Short-billed Corella" by **TONY SILVA** -Specializes in the maintenance & breeding of several Indonesian and neo-tropical species. Writes a bird column for *Pet Dealer.*

"Amazon Parrots" and "Parrot Hatchery" by **JOHN STOODLEY** - Prominent British Aviculturist noted for breeding the difficult Pionus species; author of *Parrot Production;* will have a display in the Exhibit Hall.

"Avicultural Techniques of Large Parrots Developed at Aviculture Institute/Behavioral Study of Birds Ltd." by **DALE THOMPSON** - Director of Behavioral Study of Birds which is involved in reproducing over 70 species of psittacines.

"Large Psittacine Husbandry" and "Ranges and Subspecies of South and Central American Psittacines" by **HOWARD VOREN** - During the past ten years has traveled extensively through Central & South America doing field studies.

PHEASANTS, WATERFOWL & GALLIFORMES

"Pheasants" by **MARY DAM** - A very knowledgeable aviculturist on the breeding and rearing techniques for game birds and waterfowl.

"Beginning a Collection of Galliformes" by **JAMES DUROY** - Owns and operates a 50-acre bird farm in Mississippi raising pheasants, quail, turkeys, peafowl and Tinamau.

"Propagation and Management of Cranes and Flamingos in a Private Collection" by **CHARLIE SIVELLE** - Has been breeding various game birds, cranes and flamingos for the past thirty years. Owns and operates one of the largest non-commercial, privately-owned collections of rare and endangered pheasants and cranes in the world.

"The Importance of Private Waterfowl Propagation" by **DOUG GOODE** - This Alabama aviculturist is known throughout the U.S. and Europe for his expertise in waterfowl propagation.

GENERAL INTEREST TOPICS

"Avian Construction" by **DR. RICHARD BAER** - Special advisor of AFA. As a veterinarian and breeder of birds he has a keen interest in avian nutrition, domestication and environmental improvements.

"Public Relations for Your Hobby" and "A Youth Program for the '80s and Beyond" by **TANNER S. CHRISLER** - Has 30 years of experience in sales, advertising and marketing and also in breeding pigeons with a special interest in color genetics.

"Discovery Island's Avicultural Programs" by **CHARLIE COOK** - Curator of Discovery Island, Walt Disney World.

"Artificial Insemination - The Key to Success in Captive Avian Reproduction" and "The Theory of Imprinting and Its Effects on Reproduction in Birds" by **WALTER C. CRAWFORD, JR.** - Founder and Executive Director of the Raptor Rehabilitation and Propagation Project Inc., one of North America's largest bird of prey research facilities.

Scandinavian Aviculture, Past, Present, Future" by **ANDERS HANSSON** - A noted aviculturist from Sweden who will tell us about the first captive breeding of the Blue and Gold which took place above the Arctic pole circle.

"Nutrition in Pet and Aviary Birds" by **TED J. LAFEBER, DVM** - An outstanding practitioner of avian medicine. He has prepared almost 200 films and hundreds of slides & color photos dealing with various aspects of avian medicine.

"Importation of Birds" by **BERNIE LEVINE, DVM** - Owns and operates Pet Fram, Inc. and four quarantine stations.

"Psychology of Bird Keeping" by **RAMON NOEGEL** - A world-reknown aviculturist for the breeding results at Life Fellowship, especially first breedings of endangered Amazons.

"The California Condor Story: What it Means to Aviculture" by **DR. ART RISSER** - General Curator of Birds, San Diego Zoo and Wild Animal Park. He also serves as the Zoological Society's coordinator for the California condor recovery program.

"Acquisition and Transport of Antarctic Penguin Eggs" by **FRANK S. TODD** - Corporate Curator of Birds, Sea World, Inc. Elected to the American Game Breeders' Avicultural Hall of Fame in recognition of his first captive breeding of harpy eagles, red lorikeets, whispering ibis, giant tinamou and emperor penguins.

"How to Incubate Eggs" by **JAMES DUROY** - A very dedicated aviculturist who has been raising game birds for the past 29 years.

"100 years of Protecting American Animal Health" by **DAVE W. GOODMAN** - Public Information Officer with USDA. Works with the regulatory side of the Agricultural Research Service which is known as the Animal and Plant Health Inspection Service.

"Government and the Aviculturists Working Together" by **DR. KEITH HAND** - Principal Staff Officer, National Emergency Field Operations, Emergency Programs, USDA, APHIS.

"A National Cage Bird Improvement Plan?" by **DR. IRVIN PETERSON** - Chief Staff Veterinarian, Poultry Diseases, Veterinary Services, APHIS, USDA.

"How to Evaluate Success in Hand Rearing" by **TOM ROUDYBUSH**

VETERINARIAN SEMINARS HELD ON SUNDAY, AUGUST 5, 1984

"Psittacine Pediatrics" and "Management of Disease Outbreaks in the Aviary" by **SUSAN CLUBB, DVM**

"Hatching Disorders and Neo-natal Care of Psittacine Birds" and "Emergency Procedures for the Aviary" by **KEVEN FLAMMER, DVM**

"A Review of Papova-like Virus Infections of Fledging Psittacines" and "Diagnosis of Disease Outbreaks in Aviaries" by **ELLIOTT JACOBSON, DVM, PhD**

"Management and Disorders of Young Waterfowl" and "Avian Diagnostic Endocrinology" by **JOHN OLSEN, DVM**

"Diseases and Disorders of Young Passerines" and "Diseases of Breeding Passerines" by **DAVID RUSSELL, DVM**

"Early Detection of Hand Feeding Problems" and "Care of Breeder Birds and Eggs for Production of Chicks for Hand Rearing" by **TOM ROUDYBUSH**

A Way To Go!

Attending the American Federation of Aviculture convention in Orlando, August 1st through 5th should be a fun and enriching experience. Schulman Travel of Encino, California, has been chosen to handle all travel arrangements for those attending.

In cooperation with Delta Airlines, Schulman Travel will make sure you get the lowest possible airfare to Orlando in August. For those not qualifying for any published discount fares, Schulman Travel, with Delta Airlines, is offering a convention rate — 30% off coach fare with absolutely no restrictions. Seating is limited — it is important to reserve early. Call toll free in the U.S. 800-792-0222 or in California 800-327-8945.

Schulman Travel has also blocked group space on Norwegian Caribbean Cruise lines sailing on August 5th to Puerto Plata, St. Thomas, San Juan, and Nassau. For as low as $1,250.00 including airfare from most major cities to Miami, you would need only pay the airfare Miami to Orlando for the convention dates. For such a low price you can combine the vacation of a lifetime with a fascinating convention week. Book early as space is very limited.

Again, for all travel needs make one free call to Schulman Travel at US 800-792-0222 or California 800-327-8945.

The Indian Strawberry finch, also known as Red Avadavat, has a soft, pleasant singing voice. Its coloring is especially attractive during its in-color phase. They are best kept in planted aviaries with insect attracting shrubs and flowers.

The Red-eared waxbill on the left and the Orange-cheek waxbill on the right are close relatives from the central and western part of Africa. They are both very commonly imported finches and are plentiful in aviculture. Neither bird is easy to breed but they are excellent aviary subjects and deserve attention.

problem of eggbinding. Overbreeding, cold weather, and wet nests are the causes most frequently mentioned in many standard sources. Though these are aggravating factors, certainly, they cannot be and are not the basic cause of eggbinding. If cold weather were the cause, every bird that laid its eggs in the early spring would die of eggbinding. The opposite is true. Emperor penguins lay their eggs at temperatures as low as 70°F. below zero, with never a case of eggbinding. My own finches never suffered eggbinding at temperatures as low as 18°F.

Neither can dampness and wet nests affect the laying, or every wild bird that laid an egg on a rainy day would be eggbound and dead. Again, the opposite is true — eggbinding is almost completely unknown in wild birds of any species. Overbreeding is an equally unlikely possibility. In attempting to deliberately overbreed a pair of birds, I allowed them to breed continually for two years. Every one of their dozens of young was completely healthy and in perfect condition, and the hen never became eggbound. However, one difference in their care was noteworthy: their diet was as nearly perfect as available food supplies allowed.

The conclusion reached by many experimental breedings was inescapable. Eggbinding is basically a nutritional deficiency problem. The particular nutrients involved are primarily a vitamin A deficiency, and secondarily a deficiency of the essential fatty acids, also called vitamin F in some American sources and most European writings. Vitamin A is vital for the health of the mucous membranes in the oviduct, as well as in other parts of the body. A deficiency of this vitamin will cause the mucous cells to lose their elasticity and become hard and inelastic. When an egg must pass through an oviduct that has lost this necessary elasticity as a result of vitamin A deficiency, the egg becomes stuck, and the condition is known as eggbinding. No amount of straining by the hen can force the egg out, and she will die without some assistance. The time-honored remedy of introducing a few drops of vegetable oil into the vent is as effective as any treatment for an eggbound hen. After you massage the oil into the abdominal area gently, you can usually force the egg out gently with your fingers. Nevertheless, this only solves the immediate problem and does not affect the basic cause of the eggbinding.

The essential fatty acids are incorporated as part of the structure of the tissues of the oviduct. If the oils or oily seeds in the diet are inadequate, the supply of essential fatty acids will be deficient, and the tissues of the oviduct will be poorly formed. In such an unusual deficiency, even an abundance of vitamin A in the diet will not prevent eggbinding. As indicated, the best dietary sources of the essential fatty acids will be the oily seeds — rape, flax, poppy, niger, hemp, sunflower, and safflower. Most finches are unable to shell either sunflower or safflower seed, so they must be chopped up or shelled before feeding. The best sources of vitamin A are insects, hard-boiled eggs, and the commercially prepared foods mentioned earlier.

Two other nutritionally related problems are also exceedingly common in finches. These are the problems of infertile eggs and embryos dying in the shell before hatching. It is quite rare to find either of these problems in the nest of any wild bird, and under ideal conditions in the cage or aviary, either problem should be equally rare. Unfortunately, many breeders experience a very high rate of infertility and embryos dead in the shell. This rate can amount to 50% of the eggs laid or even more. A problem of this magnitude is a sure indication that the finches' diet is seriously deficient in one or more nutrients.

A deficiency of any required vitamin or mineral will cause either infertile eggs or embryos dying in the shell during incubation. This is nature's safety mechanism to prevent population from outdistancing food supply. If there are insufficient nutrients in the food for the adult birds and the formation of a clutch of eggs, there cannot possibly be adequate amounts for the rearing of a nest of young ones. For this reason, reproduction would be impossible at that time, and nature ends the possibility through the means of embryos dying in the shell before hatching and infertile eggs.

The same safety mechanism carries over into aviculture when we attempt to breed finches on an inadequate diet. Any breeder who experiences a substantial problem in these areas needs to review the diet offered to the finches very thoroughly to discover which of the required nutrients are lacking.

Another problem that occurs with distressing frequency in finch breeding is the tendency in the parent birds to refuse to feed the young when they hatch. In many cases, they will throw the newly-hatched young ones completely out of the nest. This problem has turned many promising finch breeders

away from finches and towards the more dependable psittacine species.

The cause of this problem is simply explained, but the solution is difficult. Most of our finches at the present time are imported birds. Trappers in their native area have caught them and shipped them to the American bird market. Though most society finches and zebra finches are raised in the United States, most other foreign finches have come to us through the process of trapping, shipping, importation, and quarantine. This constant handling puts severe stress on all imported finches, and they are unable to settle down until they have reached the breeder's aviaries or cages.

When their breeding season arrives and they attempt to breed, the foods that they have been fed as wild nestlings and that they seek for their own young are not available. When they cannot find the insects or other natural foods that instinct tells them are suitable for the young, they will not feed the newly-hatched babies anything, and frequently they will eject them from the nest. Again, this is nature's method of limiting breeding when food supplies are scarce. Since the finches do not recognize equivalent foods in the aviary as suitable for the young, they will feed them nothing.

The only way to solve this dilemma is to place the eggs of any birds that refuse to feed their own young under suitable foster parents. Several species are very dependable in this respect, and they will raise successfully any nestling similar to their own that the breeder places under them. Both society finches and zebra finches are excellent for this purpose. Once this first generation is raised successfully under your local feeding and conditions, they will in turn feed and raise their own young dependably on your local diet. Only the rarest of pairs of imported finches will complete their own breeding cycle and raise their own young to maturity.

Once the breeder has conquered all of these problems, any others encountered will be minor. Even the most successful breeders will have continual problems in handling and breeding their birds, and there are literally hundreds of possible problems that are not covered in this article. Nevertheless, these are by far the most common problems that any finch breeder will encounter. Every species has its special habits and requirements, and once the fancier can handle the problems mentioned here, any others will be just another interesting challenge to anyone who maintains or breeds finches. •