



FCA Parrotkeeping How Do I Raise My Birds?

By Marcy Covault, ©2006, r2016, All Rights Reserved
www.birdcompanions.com



Feathered Companions Aviary is a small home-based aviary, (since 1991) where chicks are fed in the kitchen and fledged in the home. I get frequent queries for explanations of my handrearing and general feeding methods, and hopefully, this article will answer many questions. It is meant for the pet owner as well as the small home breeder, for whom bird breeding may be a family endeavor, and for whom integration into the family environment is important. These are my methods and rationale—not the only way, but what works for me! There are links on my web site to more detailed articles with pictures, for example, on my outside aviary enclosure and interactions with my birds.

Parrotkeeping as Aviculture



Aviculture is the practice and art of birdkeeping, and “parrotkeeping” is a specialized part of aviculture that focuses on the hookbill species. The environment and methods of keeping birds vary widely in the U.S., from small single-pair breeders to large commercial breeding facilities.

Depending on the size of the breeding “operation” and the aviculturist/staff available to maintain it, the type of housing and feeding/maintenance schedules will vary, from moderate to intense time involvement. Aviculture, like most animal husbandry endeavors, is labor-intensive, and those involved have to enjoy what they do to stay motivated to continue. In a home aviary, because the birds are literally part of the family environment, balancing total family needs with aviary activities becomes crucial for long-term integration of human and avian relationships and enjoyment.

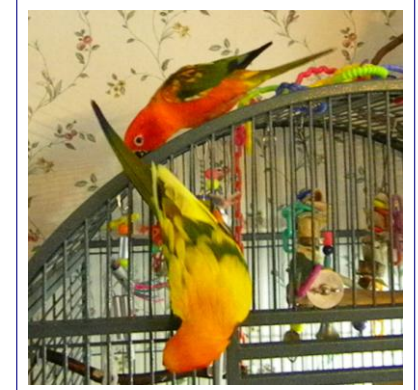


Home Aviary

Most of my experiences are with smaller hookbills, formerly including cockatiels, Bourke’s and lineolated parakeets, Pacific parrotlets, Indian ringnecks, pionus, kakarikis, and rosellas, and I am now specializing in only Pyrrhura (green cheek, crimson bellied) and Aratinga (sun) conures.

I have been raising small parrots since the early 1990’s and have tried different environmental manipulations, feeding regimens, and handling techniques. I’ve learned a lot the hard way, as well as the easy, natural way, and I continue to learn each day from others and from my birds.

The majority of my breeding pairs of birds are in a dedicated aviary building right behind my house, where they have interior cages with bumpout fronts for food and water, and portals that lead to outside flights where they can get fresh air and sunshine. Birds in the house (personal pets and youngsters) get out daily to interact with me and each other. They can fly to and from various play/feeding stations, some of which hang from the ceiling and some of which sit on top of cages. The flock dynamics are very interesting!



Basics and Variables

Type and size of cage and lighting, schedule of feeding, and environmental enrichment are all considered for successful breeding. What makes it difficult for the

beginning breeder is that there are many ideas on what is the “best” way to raise and maintain birds. There are some “basics” (and many books and articles expound on those) and some personal-choice “variables” (and just as many books and articles discuss those). Each person has to choose the variables they prefer and which work for them. Following are my choices.

Cages—It’s basic that parrots should be in an appropriate cage—type, size, sturdiness, functionality—for their species, use, and maintenance. My “house” birds are all in powder-coated cages, because these are the easiest to clean, are long-lasting, and they “look good” in the home. In the past few years, because of competition and sources from other countries, powder-coated cages have become affordable for most people. One must be careful with these though, as quality can vary dramatically, and some may provide dangerous exposure to lead or zinc. Some of my cages are dometop, and some are flat-top with perches and playstands on them. This provides variety and preference for those birds that like one type better than the other. These cages are sturdy and durable, and they can also be rolled out on the back patio, on a rotating schedule, for washing (a portable power washer works great).

Lighting—In my aviary building, I use fluorescent lights, usually four-foot suspended, with full-spectrum tubes to provide lighting to indoor cages in the aviary. There are several brands of these “full spectrum” tubes, but they should be for birds, not just plants or reptiles, as the right UVB is important to birds. For individual house bird cages, I have single floor lamps with full spectrum bulbs that are portable and work very well. The house birds go to their cages quite easily when the lights dim. I also have small nightlights in each area, so that they are never totally dark. Since they all have sleepboxes in their cages, they can be in the dark if they wish.



Feeding and Watering—Bowls in the bottoms of cages (not under perches) provide water and afford bathing opportunity for my birds. The bowls are rinsed and refilled daily, and sometimes twice daily if the birds foul the water or splash it all out of the bowl. Most of my birds LOVE to bathe in their water bowls. Also, when a hen is laying, she will get her belly wet and thus regulate humidity in the nest box. Some people mist their indoor birds because of the low humidity in the house. I don’t do that, but rather keep that water bowl full enough for bathing. Some of my birds, when out playing, will fly over if I turn the kitchen faucet on, and either jump on a plate I hold beneath the faucet, or sit in the palm of my hand and enjoy a quick shower.

Although some people use automatic watering systems and others use water bottles on their cages, I prefer the bowls, not only because the birds like to play and bathe in them, but also because I would be concerned about not being careful enough about water bottles—either in cleanliness (as they can harbor bacteria and mold) or water availability, as they can malfunction and stop up so that the bird or birds do not have water for a period of time. I have known breeders who have lost birds because they didn’t realize a line was plugged or that all the water had leaked out.

Depending on the cage and type of food, feeding bowls may be in holders or in containers on the bottom of the cage. Soft foods need to be easily accessible for the person servicing the cages, and those bowls are washed daily. Dry food bowls for pellets or seed mixes may only be changed once or twice a week, depending on how quickly they are emptied and if they have been fouled with feces or soft foods. For breeder pairs in the indoor/outdoor flights, there are “bump-outs” on the fronts of the indoor portions where food and water bowls are provided. These cages are all 1/2” x1” galvanized wire, which are harder to clean than the powder-coated cages,



Indoor/outdoor Aviary
Indoor portion with bump-out
feeders on front and nestboxes



Outdoor flights
with outer “catch-pen”



partly because they are larger, so more unwieldy to take down and power wash (if they are installed indoors). That means they get washed less frequently, but since the birds have access to outdoor flights, the indoor portions don't get as dirty.

Foods and Feeding

Feeding a balanced diet to a mixed group of parrots offers a challenge because what's required by one species may not be perfect for another; what's available for the birdkeeper may be limited; and what the birds will actually eat may not be what is the most desirable.

Because of the myriad of books and articles professing the necessity and merit of different diet types (much like for humans), it can be very confusing to the budding breeder. One person will tell you their success has to do with feeding mostly pelleted feeds, and another will tell you they never feed pelleted feeds. One says sprouting is too problematic because of mold and bacterial problems, and another says that sprouting is easy and necessary for healthy birds. It truly is up to the aviculturist to do research for themselves, use common sense, and make decisions based on what works for them and their birds.

Sprouts

Birds in the wild forage and eat a variety of foods, including "live foods," e.g., growing plant parts, flowers, etc. Providing a suitable diet can be a challenge for the aviculturist, and there is more than one opinion on how best to do this.

Sprouting is one method of providing living, growing food, and the variety of grains and seeds available offer choices that fit species and aviculturist's needs and preferences. For me, sprouting is easy, and if you follow a few basic rules—including using high quality seeds and grains and following basic cleanliness procedures—there should be no problems with providing fresh, living sprouts for food.

Using either bleach, GSE, or other mild disinfectant in the soaking solution is advisable, because mold spores are everywhere in our environment, and they could otherwise start growing during the soak.

"Sprouting" is a somewhat ambiguous term, however. Depending on who's talking, it can mean anything from a 24-hour "soaked seed/grain" to a several days "growing" routine. Based on what I have read and experienced, I usually use a 48-hour "sprouting" routine, when the seeds/grains have swelled and have just started a small tail (nib). The chemical process of conversion to a growing plant from a dormant seed has begun, and the enzymes have started their work. I have read this is when there is optimal nutritional value for the parrots. I can leave this stage sprout in the soft food bowl all day—where if not eaten within the first couple of hours, it will continue to develop—and feel confident that there is little chance of spoilage. If I wait until the "tail" is longer, the birds seem to just nip that off, toss it aside, and eat only the kernel anyway. If you wait until there is a longer stem with a beginning leaf, you have to be very careful with cleanliness, because that time period of several days provides opportunities for bacteria and fungus to proliferate on the sprout.

I *never* feed sprouts from the store, because the chance of bacteria colonies, such as e-coli, is just too great. I also use hulled seeds and grains as much as possible, particularly with sunflower seeds, as the shells of the striped sunflower seem to be particularly prone to growing a furry fungal coating rather quickly, whereas sunflower hearts sprout beautifully, and rarely with fungal problems. I also mix lentils (from the grocery store) in with the sunflower hearts for sprouting, as the birds seem to enjoy those also.

Morning Feeding

For all of my birds, in a large stainless steel bowl, I mix a smorgasbord of the following in the approximate ratios shown:

- ✓ Rinsed sprouts (1/3)
- ✓ Chopped fresh veggies and fruit (e.g., kale, carrot, apple) (1/3)
- ✓ Seed mix (1/4)
- ✓ Other, e.g., bird bread, spices, etc. (balance)

For parents feeding chicks, I will feed more of the egg food and additional crumbled bird bread.

**Sprouts
24 hours**



48 hours



Vegetables and Fruit

As a daily staple, in the morning, I typically feed kale, collard, or mustard greens, or broccoli for the dark green vegetable, and carrots for the yellow-orange. I occasionally use parsley or celery for variety. Apple is the usual fruit offered, although occasionally banana, grapes, or other citrus may be offered as a side dish. I toss the veggies and fruit into my food processor, pulse a few times to coarse-chop, and include in the morning feeding. I also keep back a few small stems and leaf pieces of the vegetable and put atop the soft foods in youngsters' bowls for them to nibble on and play with. In the afternoon, I give a small amount of mixed vegetables (corn, peas, carrots), which have been thawed under running hot water, drained, and sprinkled on top of any morning soft foods still remaining in bowls.

Growing Food

I do not have time to garden much, but being able to control the quality of vegetables and fruits more than just looking for "organic" in a store is obviously desirable. You can also grow what may not be readily available locally, e.g., rose hips, an excellent food for birds. In addition if you have lady banksia rose bushes or willow trees, the flexible fast-growing limbs are excellent for bird gnawing.

Seed Mixes

I believe that conures and other small hookbills need some seeds. Because I am never 100% satisfied with commercial seed mix blends, I start with a good, clean, small hookbill seed product, and I then add a variety of other grains or seeds, depending on what I have. It doesn't have to be the same all the time! I may add split green peas, rye or barley flakes, oat groats, pepitas (hulled raw pumpkin seed), flax, etc.

Pellets

Pellets make up about 20% of my birds' diet. Some birds love them, and others ignore them. I either have a separate dish for pellets, or I sprinkle lightly over their soft foods in the morning. Many of mine will eat Roudybush brand pellets, while they may not touch some of the other "natural" brands I have tried. Almost all will eat Zupreem Cockatiel Fruit Blend, so that's what I usually feed. Although I might prefer non-dyed pellets, since these are not the major part of their diet, I don't worry about it. If I fed a diet that emphasized pellets, I would likely feed primarily Roudybush or one of the other good "uncolored" pellets. I have been advised that the color mutation parrotlets, in particular, do not tolerate pellets well, and eclectus experts caution against colored pellets with that species.

"Bird" Bread

The baked specialty bread I make is nutritious and appealing to the birds. There are MANY recipes on the internet, but I usually make some variation of the recipe I have on my web site. During breeding season and for youngsters, I will crumble blocks of the "bird" bread into the morning soft food or put small chunks of it besides the soft food in the bowl.

Cooked Mixes/Hot Mash

There are recipes galore for cooked mixes and mashes, and I have fed many of them, as enticements for youngsters, as soft foods for parents feeding chicks, and just for special offerings. However, one has to be careful about spoilage with these, and it is not wise to feed as a dietary mainstay or frequently because of the high protein content.

Coarse chopped kale, carrot, and apple



Breakfast for the "bird gang"



Dish for youngsters



Snacking on peas and carrots



In the winter months, I will sometimes feed a small amount of cooked brown rice/lentil mix to birds in indoor/outdoor cages, to youngsters inside, and to a limited extent to adult birds. I have fed some of the commercial blends of mashes designed mostly for pet birds. They are well-received by most, but I have found that Malt-O-Meal (or oatmeal, or Cream of Wheat) with raisins and spices is liked just as well, and is much less expensive! With any of the cooked mixes, leftovers should be taken up within 3 or 4 hours.

Meat and Live Protein

I do not feed raw meat of any kind. Occasionally, I will feed a small piece of baked chicken breast to my sun conures, who enjoy it as a treat, but I do not typically feed any meat otherwise to my birds.

Years ago, when I raised kakarikis, I was told that they must have meal worms for successful breeding. So, I bought some and followed instructions on how to keep a colony going for fresh, live food. When the kakarikis left, so did the meal worms. I'm just not cut out to handle wiggly, live food, and the adult beetles getting into the house did not thrill me at all!

Other Specialty Foods/Supplements

To the soft food mix, I add the same spices I add to handfeeding formula, sprinkling lightly over. I also add a supplement, such as Higgins Snack Attack Proteen 25 or Quiko Classic (both are egg foods) if it is breeding season and if I have lots of youngsters. Some seed mixes have dried fruit, and you can also buy dried papaya, bananas, pineapple, etc., but be sure these do not have sugar added, and preferably, are not sulfite treated.

Snacks

A small amount of healthy snacks is fine for pet birds. I usually limit those to 1/4 to 1/2 unsalted dry roasted peanut, dried fruit such as papaya, and one or two pieces of unsalted popcorn. For aviary birds, I will pick rose hips or willow limbs and put in their outdoor flights, and they will shred them!

Breeding

When I started investigating breeding in suspended flights, one of the first things I was told by a breeder with an outdoor setup was that you wanted a large flight for exercise, a sturdy perch for breeding, and a nestbox to be the focal point of the pair. Toys were distractions from their main activity—breeding. I didn't buy into that then, and I still don't. Birds are intelligent creatures, and in the wild they have not only lots of area to fly, but also lots of area to explore, as well as variety in food and play objects—and of course, survival issues from predators.

In our home aviaries, they do not have to worry about predation if we can make the areas safe from night marauding creatures, such as opossums, raccoons, ringtailed cats, ferrets, owls, rats, coyotes, snakes, etc., and daytime predators, such as hawks and domestic or feral cats.

Because their flight space is necessarily limited in a home aviary, particularly if we are setting up individual breeding pairs, making these setups as interesting and stress-free as possible can be a challenge—but it is in their best interest, and I think we have an obligation to provide that enrichment for their well-being.

Cages

Many breeding pairs are not very human-oriented and may be stressed by frequent handling or nearby activity, though most of my breeder pairs are interactive with me. Those that are not are in larger flights because they don't get out as often, and with

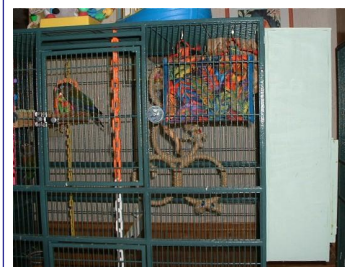
Sharing breakfast and the morning paper



**Nestbox Types
Bootbox**



**Conure:
Vertical grandfather box**



privacy from human “living” areas. Pet birds have their own cages indoors, and where possible, I have TWO per cage, so that they have buddies and are not quite as clingy and dependent on me for attention. They still want and need attention, but having a grooming buddy is less stressful than being alone in a cage.

Feathered Neighbors and Sight Barriers

Many species are sensitive to their neighbors, rather like people. A quiet person probably doesn't appreciate a super-noisy neighbor. Same thing with birds. And in the case of pairs set up for breeding, noisy neighbors can mean no eggs, infertile eggs, broken or eaten eggs, killed or maimed or deserted chicks—not exactly a pleasant scenario!

As an example, even though I had raised a pair of green cheek conures in the same area as my sun conures, when I set them up in a cage near the suns, the green cheeks would not raise chicks, and I believe it was due to the volume of noise from the suns. When I moved them to a quieter area, they did much better. Quickly changing an unacceptable situation is key though, because they can get in the habit of destroying eggs, etc., and that's harder to change once established.

For some species, sight barriers are necessary for less stressful breeding. For my conure flights in the aviary, there are partial visual barriers between the flights, particularly obstructing sight of the entrances to the nestboxes by other pairs.

Nestbox Inspections/Intrusions

Unwelcome intrusion!



I give my breeding pairs as much privacy and lack of intrusions as I can. That means I usually don't check 2 or 3 times a day to assuage my curiosity or eagerness!

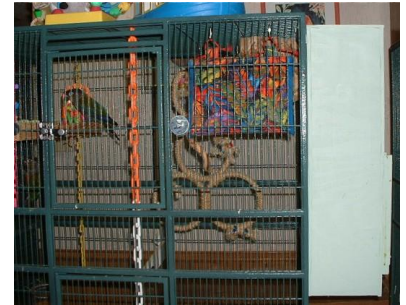
Different pairs are tolerant to different extents to nestbox inspections. Where possible, I desensitize the birds to my checking nestboxes, but there are times when I leave them alone. Once I know a hen is laying, for example, I may only check once every couple of days, and try to time it when she is out of the nestbox. Once the eggs are laid, I may not

check again for several days so long as the hen is setting well. If I am concerned about fertility, I will find a time after a few days to candle eggs (using a long-necked pen light, but not handling the eggs, if possible). Then I wait. I may check every few days if the hen comes out, primarily to see if the eggs look like they are being kept in a “setting” cluster and to be sure there are enough shavings under them (as some will dig down and either discard or pile shavings in the back away from the eggs—or bury some eggs).

If all seems to be going well, I listen for the first chick “peep” and mark it on the breeding sheet I keep for that pair. Further intrusion depends on the pair. For example, most of my conure pairs do not mind my examining briefly while they are out chowing down to feed the chicks. However, I have one pair that sits very tightly on eggs and chicks, and they both get very upset if I open the inspection door during the last of their incubation time and the first week or so after their chicks hatch—so, since they are good parents, I respect that and mostly listen at the door for the peeps and sounds of parents feeding. I will still briefly check every few days if I can pick a time when they are both out of the nest—difficult, because when they hear me coming, they usually both dive in!

With some pairs, e.g., Indian Ringnecks, tapping on the inspection door will usually cause the hen to go to the back of the nestbox or even out the entrance,

Indoor breeding setups



so inspection and examination of chicks is easy. Parrotlets and some green cheek conures are often the least likely to move away from eggs and chicks.

There is a judgment call that becomes better with experience and knowing your pairs—when to monitor nestlings closely and when to just let the parents do their job. No one can make that call for another—just advise what they might do in that case. It’s tragic to make a decision to check and have a parent bird kill a chick right in front of you, but it’s also tragic to not check and have a parent bird mutilating chicks when you could have seen a problem and separated them. We don’t always in our own lives make the best decisions, no matter how much life experience we have, nor should we expect perfection in our birdkeeping. We do the best we can and realize that nature sometimes throws us a nasty curve.

I don’t weigh chicks in the nestbox. I sometimes weigh chicks when I am handfeeding, but I also rely on my “feel” of them and if they are eating well. If there is any suspicion of something not quite right (e.g., regurgitating food, poor feeding response, sharpening keel), I will keep a weight log and consult a vet if necessary. I also keep wild oregano product called Quickon Med V (antibacterial and antifungal) and may add a few drops to the last evening feeding if I notice a bit slow response or sluggishness in a chick. Problems need to be caught quickly, as chicks can go down very fast.

Co-Parenting

There is just enough non-conformist in me to explore aspects of my interactions with my feathered companions that are not in mainstream books—I feel relaxed enough with them and they with me to expand what tradition says should be our relationship. One of these expansions is through co-parenting.

Co-parenting is a term used to apply to some degree of joint rearing of chicks from hatch to weaning—depending on the situation, the temperament and setup of the parent birds, and the schedule of the person doing the co-parenting. It includes, but may not be limited to, the following three methods:

- (1) Supplementing handfeeding morning and/or evening, handling/playing with the babies, and leaving in the nest box 4+ weeks or even through weaning;
- (2) Handling/playing with the babies for a daily period of time (usually 5 to 15 minutes) without handfeeding, and leaving in the nest box through weaning (and even beyond); or
- (3) Handfeeding in the morning, handling/playing with in the evening, and pulling from the nest box at or near fledging for handfeeding (and/or co-feeding with parents).

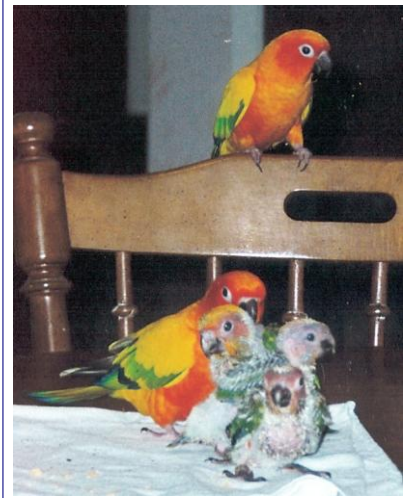
Co-parenting can be useful also when first-time parents are not quite tending the babies as well as experienced parents would, and the breeder can supplement feeding, also handling the babies for early socialization, while leaving with the parents.

Want to know more? See my article: “Coparenting with Companion Sun Conures.”

Raising Youngsters

Depending on the species and the quality of parenting, there are different ideas on when to take the chicks for handfeeding. I try to leave chicks in with the parents as long as practicable, realizing that if I take them with they are a bit older, I must consider the environment more carefully and spend extra time with them in the first few day’s adjustment period, because it is usually more stressful for a 3+ week old chick to adjust, for example, than for a 10-day or even 2 week old chick to adjust. Older chicks are more

Sun Conure Co-parenting



aware of their environments and more used to the dark coziness of the nestbox and ministering of the parents, so it may take them longer to adjust.

Brooder Environment

I do not use clear, lighted brooders such as the aquarium types, because I believe those stress chicks more than a dark brooder. I try to simulate the nestbox environment in order to reduce stress on the chicks by starting out with a fairly dark brooder for the first week or two.

When I feed, the lights are dim, which seems to startle chicks less than brighter lights. This seems to be particularly true for more timid species, such as Indian Ringnecks. Unless you pull ringneck chicks to handfeed very young (up to 2 weeks old), they are more likely to react negatively to being placed into a brightly lit environment from the nest, and I think they stress unduly. I have observed that parent-raised ringneck chicks did not fledge from the nestbox until 7 or 8 weeks old.

Even with the conures, chicks would peep out at 6 weeks old, but not really fledge out until about 7 weeks old. If we pull them for handfeeding at 3 weeks old, I don't think they are even close to being ready to be placed all day in bright lights!

Commercial or "home-made" brooders—I have 3 commercial brooders, but I rarely use them. They are larger and bulkier than "home-made" brooders, which is not necessary for the small parrot species I raise. I also dislike the fans in the commercial brooders. Fans dry out the air, and nestboxes don't have fans. If temperature is critical, e.g., with younger chicks and singles that don't have clutch-mates to help keep them warm, then the commercial brooder is advisable, as it is much more precise in heat and has an air circulating fan and filter, and humidity can be regulated. It is still prudent to have a backup thermometer and hygrometer, and to calibrate the commercial brooders if temperature is critical. Even the digitally equipped brooders can get "off" in temperature, and that can mean the difference in thriving, or even life or death to a young chick.

I usually use one of two sizes of the double-box home-made brooders, with either a heating pad (usually on low) along one side or the "cuddler" heater (water bottle with aquarium thermometer) inside the container.

Intermediate Plexibrooder



The former is my preference because it's easy to adjust the heat according to age of chicks and size of container needing heat. I have holes drilled in the top of the outer container, and I can regulate temperament well enough by covering holes with a cloth as needed. I also put a temperature sensor in the brooder (with temp gauge on outside).

Intermediate plexibrooder—The plexibrooder is an intermediate brooder that I use between the dark brooder and the weaning cage. It sits in a secluded area, where the chicks can venture out and see the world, but not be frightened by too-bright lights or other birds moving around rapidly.

A towel is draped over the back half, and a wire top rests on the front half. I use a substrate of newspaper layers in the bottom, with white paper towels over that. New layers of paper towels are put as necessary during the day, and the towels are totally changed, along with a layer of the newspaper, each morning. Chicks usually stay in the plexibrooder for a week to 10 days. When they are climbing all over it and looking for a way out, they graduate to the weaning cage.

From the time the chicks are in a more lighted brooder (e.g., the plexibrooder), they have a sleepbox in the back of the brooder against the heating pad, which warms the back of the sleepbox, and which is separated from the main brooder area with a clear

Brooder types Homemade



Commercial



divider, so the chicks cannot get to the pad as they learn to explore. At first, the chicks will stay in the sleepbox, but within a day or two, they begin to peep out, and finally to step out, briefly at first, and more exploratively as time goes on. When they have done exploring, they go back into the sleepbox to nap. In the sleepboxes, I have a layer of newspaper with white paper towel lain on top. A new towel layer is put on with each handfeeding, and the towels are totally changed each morning.

Weaning cage—The weaning cage is often a smaller cage than the flight cage that they will ultimately be in, although it is big enough for them to move around in and explore, climb, flap, and even take very short flights across, up, and down. I start with their familiar sleepbox set in the bottom of the cage (with newspaper and white paper towels on the bottom grate until they are comfortable climbing around). I move the sleepbox up once they are regularly hanging out higher in the cage. By following this process, I find that the chicks explore at their own rate and learn to move up and down in the cage. They also have an easier time transitioning to actual flying and are less prone to flying into walls. It usually means they take their actual across-the-room flights a few days later than they otherwise might, but they have learned in the meantime to maneuver and land in a small area, so transitioning to the larger area seems to be not as difficult or scary to them.

Handfeeding

Formula—I primarily use Zupreem Embrace Plus, because it gives me good weight gain, and I think the active smaller birds need the extra calories. If I use a “regular” formula, I find the weight gain isn’t as satisfactory, and I wind up adding a bit of plain peanut butter to the formula to boost the fat content. There are those who say not to add anything to a commercial formula because it is balanced and complete as is. Since I am a “tinkerer” and have good results doing this, I also add a very small amount of powdered spices and supplements to my formula: ginger, cinnamon, cayenne, garlic, and wheat grass. For the first couple of days after I pull chicks for handfeeding, I also add some “Instant Ounces” or Formula One (powdered carbohydrate products), and for the first week or so I put a few drops of Quikon Med V in the last feeding of the evening. Typical feedings are 8am, 12:30pm, 5:30pm, 10pm. Since it’s important that they totally empty out at least once every 24 hours, the overnight time allows that.

Syringe or spoon—Most of my handfeeding is done with a 5 cc or a 10 cc “O-ring” syringe, depending on the size of the bird. I have also occasionally used a “bent” spoon to start a chick that has been pulled for handfeeding a bit late, because they take to that easier than a syringe. I transition them within a couple of days to a syringe, as that is less messy and somewhat faster than a spoon. Others use pipettes for the smaller species, but I’ve found that the syringe works best for me.

I do not gavage/tube feed, and although I can feed pretty quickly, it’s not a true “power feeding” technique. As the chick pumps, I keep a slight pressure on the syringe plunger, so that it sometimes seems like the chick is “sucking” the syringe empty. Actually, the esophagus is open to the crop during pumping, and with very slight pressure on the syringe plunger, the food flows quickly into the crop.

One must be very careful not to aspirate the chick, so experience in developing a feel for the pressure is necessary. Otherwise, one should go much slower. If necessary, I will go round a tub of chicks, giving each a mouthful at a time and thereby get enough formula into reluctant eaters.

Overcoming Fledgling Food Rejection/Perch Feeding—When the chicks have started flying, they will often be more interested in flying rather than eating formula.

Weaning Cages



Handfeeding Setup



Weaning Cages



They will still need the formula, because they are not eating near enough food on their own to maintain their weight. I will either let them fly first (and work up an appetite), or if they are mainly resisting being in the feeding tub, I will “perch feed” them on top of the cages (where they land after flying around). It’s a less contained mess, and they will get it on their faces and chests, but they will often eat several cc’s that way, and I can catch them up after they’ve exercised and clean them up. They also have learned to preen themselves and each other by this stage. I have had them line up on a perch or cage top to get their formula (after exercising), and I will go around, as necessary, with mouthfuls to get enough food in them. Obviously, I cannot measure the amount ingested (or wasted) with this process, but I can feel their crops and determine when they have enough.

Weaning Food—*Food, food, everywhere!* That’s my philosophy with young birds. I have bowls in the floor of the cage and in suspended bowls near favorite “hang-out” perches as I can determine those. Soft food gets changed and/or replenished at least twice a day, and the “dry” food (small pellets and seed mixes) gets changed and replenished as necessary. I start with crumbled bird bread and a combination of hulled millet, quinoa, and steel cut oat groats. I also sprinkle over the soft foods (sprouts, chopped veggies, fruit) an egg food like Higgins Proteen 25 or Quicko Egg Food, and I put small pieces of leafy veggies and fruit for them to bite into and play with.

In the early afternoon, they also get the thawed veggie mix (corn, peas, carrots). Once they start picking at these foods, they develop an appetite for them, and the variety means that they don’t get fixated on one thing.. I have seen Cheerios recommended as a first food, and I never use them—that’s human food with little or no nutritional value for birds (plus added salt and sugar), and my goal is the ingestion of and acquiring of a taste for nutritious foods. Some feed millet sprays, and while those are fine, I’ve noticed that about 90% is wasted! The seed/grain mix I offer has much less waste, offers more variety in taste, and is more nutritious.

I continue to offer handfeeding formula until they are totally rejecting it. Even if they only take 2 or 3 cc’s, that will usually then stimulate their appetite so that they seek out weaning food. Withholding formula, e.g., eliminating a feeding prematurely when a chick wants it, can trigger a panic response so that the chick is begging even with food right in front of them. I opt for more feedings per day, even if smaller, rather than going to fewer feedings with more per feeding.

Handling—I cuddle and kiss on the chicks from the time I start handfeeding them. While they’re in the nestbox, I may reach in (if parents are out) and stroke them, talking softly, but I don’t think that is as critical as how they are handled once taken for handfeeding.

I am always careful to cradle them and not grab in a hurry, and to reassure them with a soft voice and whistles, and depending on the species, other sounds to which they may respond positively. For example, the crimson bellied conures will make tiny “clicking” sounds, and the sun conures (which do not whistle) make what I call “sun-duck” sounds (almost like a little quack).

Rather than specifically training “step up,” I say, “come here” or “come on” in an inviting tone. Most of the time, they will learn to step up on their own. Use of operant conditioning techniques (often used for trick training through the use of positive “cueing/clicking”) also works well.

I want to be able to slip my hand around their body and handle them all over and in



all directions—over their body, under their wings, tickling their tummies and the sides of their faces. I want them to learn that human hands are wonderful! Since it is a natural reaction to shy away from a hand coming from above (predator response), I get them used to that in a positive way when they are little.

There will be a time when they are fledging, learning to fly well, and becoming independent when most will not be inclined to come to me, particularly if they know I'm going to put them in their cages. I try to allow enough time so that they are ready to go to their cages, and I reinforce that with stroking, cuddling, and a treat—a mouthful of formula while I am holding them, for example, or a thawed kernel of corn—an early favorite!

Formula Treats—All of my handfed birds, including breeders, know what a “formula treat” is. I can go around with a syringe of formula and give each a beakful, and it's greedily gobbled. I have found that this can reinforce the “tie” to me as a provider with them (keying back to handfeeding days), so that they stay “tamer” even without frequent hands-on. This also makes it easier to give medications if I need to do that. Even my 21+YO sun likes these treats.

Health

With experience, one learns to notice when a bird is “off”—most of the time. It is not possible to be the “guardian angel” that always catches a sick, distressed, or injured bird before it happens! Accidents and problems that individual birds have in response to their environment are sometimes unforeseen and unavoidable, but they can be lessened through careful, watchful husbandry.

It is advisable to have a relationship with an avian veterinarian, and it is also wise to have at least one, preferably two other veterinarian names and phone numbers, as well as the location and phone number of an animal emergency clinic. Be aware that emergency clinics usually do not have someone experienced enough in avians to provide appropriate care, but sometimes you have no choice!

“Well bird” examinations and preventive health care—Examinations with full work-ups (blood panel and cultures) are recommended, but are not always practical when one has many birds. Testing of new birds is good practice. There are diseases that can be dormant in birds for years and then become active. However, if one has had no health problems related to disease issues (polyoma, psittacosis, megabacteria, worms, etc.), then “spot checks” of the aviary and random testing may be enough to ascertain that you do not have serious health problems. There is lots of information available on types of diseases, their symptoms, prognosis, and treatment, and each aviculturist should educate themselves.

Quarantining—It is good avian husbandry to quarantine all new birds in an area that does not have shared air (indoors) with the rest of the aviary, and where you can service that area after the rest of the aviary. An example is an outdoor flight, away from other flights, for quarantining; e.g., on a covered/enclosed porch.

Although it is best practice to have your “nursery” away from mature birds, it is also difficult in many home aviary settings. We need to be aware of the possibility of a mature bird passing on something that doesn't affect them, but which could be deadly to a youngster with an undeveloped immune system, and understand that separate areas insomuch as possible is good avian husbandry.

Biosecurity—There are common sense approaches to ensuring the health and safety of your aviary birds. State health web sites have protocols for disease prevention, including the types of precautions that should be taken by aviaries. It is essential to be familiar with these

Pyrrhura Conures
Crimson Bellied



Green Cheeks
Pineapple



Yellowsided



Sun Conures



protocols, because if a public health issue arises in your area, you may need to implement the most stringent of these precautionary measures, e.g., Virkon-S footbaths, etc.

Bird Marketing and Selling

To maintain the reputation of an aviary, business dealings with customers must be conducted with candor and honesty, including discussing the pros and cons of birdkeeping in general and the species of interest, in particular. I try to determine why buyers want a bird, why this species, what their expectations and hopes are for the bird insofar as their relationship with it, and if they realize and accept that this is a long-term commitment. I also provide an owner with my Care Guide to help them start out on a good basis with their new birds.



I have talked people out of buying one of my birds because it either wasn't the species for them or I felt the environment wasn't optimal. However, I don't feel I can truly judge someone who is passionate about wanting one of my birds. For example, one cannot always say that a child or teenager shouldn't have a bird (as some judge). It depends on the child and, more importantly, whether there is adult support and approval for the new pet bird. I ask the parents if they are willing to be responsible for the bird if the child cannot be. In the case of a teenager, if they leave home, will the parent assume the total responsibility for the bird? I also try to determine if there is anyone in the family situation who is really against getting a bird or who may have a feather allergy or very sensitive hearing (for suns), because an unfriendly human "flock member" can make a bird's life miserable in many small ways.

Though not preferable and certainly not required, I have occasionally bought a bird back a few months or so later because either it wasn't working out or the person's circumstances had changed drastically. I have also helped people place a bird (my bird or another's) in a new home when they couldn't keep it. My objective is the best home for the bird, and I attempt to make that happen.

Purchase Contract—I use a purchase contract developed from others I've read, including one from an aviculturist who is also an attorney. This contract protects both buyer and seller and endeavors to be fair to both. I also have a clause in it that they are to notify me if they are giving up the bird and give me right of first refusal for rehoming of the bird. No contract is better than the parties to it, however, and if disputes arise, one must be reasonable in resolution of issues.

After-the-sale service—I am available to my buyers (and to others) for questions and concerns. I help whenever I can in regards to birds, breeding, aviary management, etc. When I don't know the answers, I refer to other breeders or to veterinary consultation.

Networking and communicating—I belong to many aviculture-related organizations, email lists, and Facebook pages, some of which are specialty lists for my species, but many of which also are general birdkeeping, service organizations, etc. I also maintain memberships in the American Federation of Aviculture and the Avicultural Society of America, as these provide excellent networking and a wealth of information from experienced aviculturists. This type of networking—whether it's in consultation with other breeders or answering questions from new breeders or pet owners—is a daily, time-consuming effort, but I believe it is important, not only from a marketing standpoint, but also from the standpoint of learning from fellow breeders and helping to educate new bird owners. One must also learn to be clear and nonconfrontational or judgmental in dealing with others in emails. Even if you



are just joking or feel passionate about a topic, the way you come across can be misunderstood, as facial expressions and voice inflections don't come with an email!

Advertising and buyer home visits—I do not advertise in the newspaper. I utilize my web site, internet avian classifieds, specialty lists, ads in avian-related programs and publications, and networking. I sell many of my birds out of state, and I have shipped via airlines from coast to coast (including to Alaska).

I do allow buyers in my home, but I try to screen prospective buyers insofar as whether they really are or should be interested in the species I raise. As I'm not a zoo or public amusement park, and my time is valuable too, I sometimes need to clarify that my aviary is in my home, and that I take appointments. That will usually separate out people really interested in birds from strictly "window shoppers."

Although there are some exceptions, I set aside Sunday afternoons for visits, by appointment only, and I ask that they not stop by other aviaries or pet stores before they visit me. You can't insist that visitors wash and sterilize from head-to-toe before they visit, and I do have handwash gel for them at my house. If there has been any kind of public health warning out, e.g., viral outbreaks in even poultry flocks, I will screen further to determine what other birds they have or are regularly around. I would suspend home visits if there were local health concerns of a magnitude of health warnings like the END (viral poultry disease) problems in California over a decade ago.

Bird marts—I do not take my birds to marts as I feel there is too much risk of exposure to disease, particularly to young birds. Also, if one takes birds to sell at a mart, it is advisable to quarantine any unsold birds as if acquiring a new one, and to wash any clothes or items taken to the mart.



Species Selection

After having several different species over the years, from small to mid-sized, I found out what I was most compatible with, personality-wise—in other words, I determined what type of birds I wanted to share my home with! Part of that has to do with my "casualness" in sharing my home with my birds and sharing my birds with my friends. I enjoy a loose-flying flock in my home in the evenings.

After 20 years, I ultimately decided to specialize in conure species. There are differences in requirements of species, depending on size and natural disposition of that species; differences in size, safety issues, etc., and I am most comfortable with the smaller parrot species. I also feel that the smaller species, for the most part, tend to be more appropriate for novice bird owners. They are typically not as loud, destructive, and potentially physically dangerous as their larger counterparts. Some say that the larger species are more intelligent and complex in their requirements, and in some instances, that may be true—but maybe having birds that can't outwit the owners or require more than many people are willing to give is a good thing. Many people enjoy the challenge of a smart pet, but others get tired of being outsmarted!



A Few Q&A's

When do you know a chick is weaned, and when can it go to a new home?

When the chicks are eating a variety of foods well and don't beg for formula, and they hold their weight, they are weaned. They will also be playing and active in their cages, flying a good bit, and still maintaining weight without formula. I usually like a chick to be weaned for a week or two before it goes to a new home, particularly if it is going out of town or out of state, because I am not local to those buyers for hands-on assistance if the chick "regresses" to wanting handfeeding. They are very



unlikely to regress if they have been properly weaned, and that often means keeping them longer. Also, if I have a chick that has gone into a very nippy stage (which is a normal stage, particularly for many male *Pyrrhura conures*), I may not offer that chick for sale until it has grown through that stage somewhat.

Do you vaccinate your chicks (polyoma, specifically)? Do you test them for disease?

I do not vaccinate my chicks. The species I raise are not as susceptible to certain diseases for which there are vaccines, although all young chicks are vulnerable if exposed to diseases such as polyoma. However, if there is polyoma in an aviary, there are usually sudden deaths among chicks, and there are physical signs that accompany chicks succumbing. I do not test for a disease unless I have a suspicious illness or death, and I want to know that I do not have an outbreak of one of the “dreaded” illnesses (most of which can be treated successfully if caught early enough), such as polyoma, psittacosis, PBF, and Pacheco’s.



Do you provide a health certificate with chicks?

Unless a buyer requests and is willing to pay for a health exam on the chick, I do not provide it, as it is only a superficial exam, at best. In order to determine the true status of the health, it would be necessary to run blood panels and cultures, which can run from \$200 up, a cost that most buyers are not willing to add to the cost of their bird, and which, if they are, they would most likely want to be done by their own avian veterinarian.

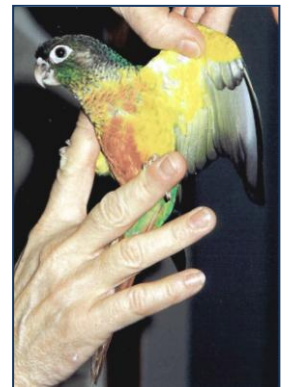
How much do you handle chicks when handfeeding?

I will spend a few moments with each chick, cradling and talking to it before and after feeding, and as they get older, I spend more time with them. Some species require more than others also. Suns are naturally very tame and cuddly. My nicknames for suns are “Cling-on sunrays”, as they “swarm” me and all try to pile in under my layered t-shirts to snuggle. Many *Pyrrhuras* are that way too, but they seem to vary more, some needing more reassuring and some more naturally tame. On the whole, they are more independent than suns. Parrotlets need early and consistent “hands-on” time, as do ringnecks. If they don’t get it, most will be flighty and touch-me-nots. Parrotlets that are handled regularly are usually very cuddly. As a rule, ringnecks do not tend to be as cuddly as the conures or parrotlets, although there are exceptions.



Do you prefer to keep pet birds singly in cages or in pairs (or more)?

Birds are flock creatures, and I usually keep mine at least two to a cage. They may be same sex or opposite sex, although for long term without breeding in mind, same sex is preferable. Although many birds do just fine as single birds in a household, I personally feel that most welcome another warm feathered body in the same room, though not necessarily in the same cage. For the pet owner, it is important to watch the dynamics among the family members, as birds sometimes attach to one person to the exclusion of others or other birds, and behavioral issues dealing with territoriality and aggression can surface. Conures are really touchy-feely birds, as a rule, and if someone works all day, having a buddy to keep their bird company would probably be welcome—whether it’s eating, playing, allopreening, sleeping, etc.



Do you flight fledge and/or clip your youngsters’ flight feathers?

All of my chicks are flight-fledged and will not have their flight feathers trimmed unless (1) they get so independent that they are very hard to catch (but I can usually outsmart them or bribe them!), and (2) when they go to a new pet home. The reason for this latter is so that they have a chance to get used to the new home and new owners before being able to fly into a door or window if startled (because it’s a new environment), and so that the new owner will have some degree of control. I trim only enough feathers to prevent upward and fast flight, as I feel it’s important that birds retain some flying ability. Whether a bird stays trimmed depends on whether it’s safe in the new home, i.e., other animals or children that might make a trimmed (or flighted) bird a problem. My “home” birds are full-



flighted, but I have a controlled environment, and I'm not worried about them flying out the door. When the flock gets going in the evenings, however, I do wince sometimes when one barely stops before slamming into something (because they got going so fast), but they must learn, and we should give them the chance to "spread their wings!"

As a note, for those who are willing to learn the techniques of operant conditioning (e.g., training a bird via "cues" to respond to recalls), that may allow one to keep their bird full-flighted; however, one has to be aware of hazards and perceived threats in the bird's environment where instinctive panic can override a conditioned response.

References and Recommended Reading

Many web sites have links to articles. Most are informative and interesting, although some are a bit dated and less reliable, having been collected over the past decades from various authors. Other specialty web sites have dozens of links.

Following are a few books that have generally excellent information. They don't always agree with one another, so one must do a bit of "sifting" through information. Some are no longer in print but usually can be obtained from an avian specialty shop, Amazon.com, or eBay.

Behavior, Training, and General Care:

- "Good Bird!" and "The Parrot Problem Solver" by Barbara Heidenreich
- "Don't Shoot the Dog!" by Karen Pryor
- "Clicker Training for Birds," by Barbara Johnson
- "Guide to Companion Parrot Behavior" and "The Second Hand Parrot," by Mattie Sue Athan
- "Why Does My Bird Do That?" by Julie Rach
- "The Pleasure of Their Company" and "The Parrot in Health and Illness" by Bonnie Munro Doane
- "Birds for Dummies," by Brian Speer, DVM, and Gina Spadafori
- "The Complete Bird Owner's Handbook," by Gary Gallerstein, DVM
- "The Conure Handbook," by Anne Watkins
- "Bringing Up Positive Parrotlets," By Sherry Lucciola
- "The Beginner's Guide to Ringneck Parakeets," by Theresa & Alan Jordan

Breeding:

- "Parrots: Handfeeding & Nursery Management," by Howard Voren & Rick Jordan
- "The Parrot Breeder's Answer Book," by Gayle Soucek
- "The Common Sense Guide to Handfeeding Baby Birds," by Sharon O'Connor
- "Handfeeding & Raising Baby Birds," Matthew Vriends, PhD

Miscellaneous:

- "The Consumer's Guide to Feeding Birds," by Liz Palika
- "Aviary Design & Construction," by D.W. Pearce
- "Holistic Care for Birds," by David McCluggage, DVM and Pamela Higdon
- "The Human Nature of Birds," by Theodore Xenophon Barber, PhD



*"Some say they don't believe that Angels can be seen or heard.
What a shame such blindness, what a pity such deafness,
when the Song of Songs abounds and heaven's flyers are all around,
only thinly disguised ... as birds." (author unknown)*