Toucans: Success in the Mountains of Northern New Mexico

by Amado Summers

Toucans

The word brings forth visions of gorgeous, exotic, long beaked beauties of Mexico, Central and South America.

The word also brings forth a vision of a family of birds that has been vanishing from American Aviculture.

I have always been enthralled, fascinated, at times literally obsessed with toucans, and have spent much time, money, and effort in studying them, searching for them, and yes, successfully breeding them! I have dealt with the highs and lows of "Toucanitius," which can be just as afflicting as "parrot fever." And I have dealt with many obstacles, including, "the big H" – Hemochromatosis, Iron Storage Disease. (referred to later in this article as "Hemo").

If in today’s Avian Marketplace, you wake up one morning and decide to get into breeding most any species of larger psittacines, well, today's your day, as the bird world abounds with such things as "selling out," "changing directions," "proven pair dispersal," etc., etc. This is no longer so in the world of toucans. Read on my dear future Ramphastid lover!

Acquisition

For many years, until 1993, with the passage of the Wild Bird Conservation act that ended commercial import of CITES listed species, many species of toucans were imported. Although never in the numbers of many psittacine species, they were still widely and cheaply available. Tocos, Red Bills, Channel Bills, were all very common in the $300 - 800 range in the 1980s. Due to a seemingly never ending supply, and the losses to Hemo, (although many times back then we didn't know why they all kept dying) hardly anyone bothered to attempt at breeding toucans. Those of us who have read the AFA Watchbird over the years will know that the main breeder, and supplier of information on toucans over the last 20 years, has been AFA's first president, Jerry Jennings, of Emerald Forest Bird Gardens in California. Jerry was keeping and breeding toucans long ago when most of us were still rubbing our hands with glee over the thought of getting rich in all our parrots, and wondering why he would set up dozens of pairs of birds that dropped like flies and had no market!

Well, things are changed now, the psittacine market has crashed (compared to the 80s heyday) and toucans are in demand, and the price is skyrocketing. I recently paid for some Toco pairs prices that were in the Hyacinth range! Yes, friends, toucans are no longer a "poor mans bird." (Ever try telling a girlfriend you just dumped and lost the money in Enron stock.)

As a side note, as of this writing, and for the last several years, two non CITES species are still being imported and are readily available, at a reasonable price, Swainson's Toucans, and Collared Aracaris. This will more than likely change at some time in the future.

My Aviary

For years, I kept my toucans in outdoor flights, and living in a temperate area, had to catch them up every fall, and keep them caged up all winter. This was stressful on the birds, and keeping multiple pairs of toucans in cages indoors is a messy, time consuming affair! Toucans can handle fairly low temperatures if they have protection from wind, and rain. But if you are in an area that gets under freezing temperatures at night consistently, without an attached heated shelter, you probably will have to move them inside in the winter.

For quite some time I contemplated another option, and three years ago after extensive research, I built my toucans a passive solar aviary, that allows them to stay in their flights year-round. Living in northern New Mexico, which is a "hotbed" in passive solar construction, I studied many different concepts.

The structure my birds live in, is the brain child of Taos New...
Mexico Architect, Michael Reynolds, and is called an “earthship.” This is a structure with three-foot-thick rammed earth walls, south facing glass glazing, and super insulated roof. The whole building is buried six feet into the earth, with a rear berm. The combination of thermal mass, solar gain, and super insulated roof make a structure that maintains a tropical-like temperature year round. I have seen outside temperatures of 10 below zero in the winter, and 105 in the summer, and it still is usually in the 70 - 80 degree range inside, year round. This is without any fans, heaters, air conditioners – in fact, this aviary is completely off the power grid, and generates its own warmth, and cooling, using the principles of solar energy, and thermal mass. This allows me to have plenty of tropical foliage inside, to provide an environment my toucans love. Plus, I am actually able to grow some fruit for them, in a 75’ long greenhouse on the South side of the building.

One thing that is very important when building such an aviary, is having access to constant fresh air. I have visited zoo conservatory type aviaries in the winter that are stuffy, smelly, musty places. My aviary is designed with a natural venting system, using front windows that are low to the ground, and operable skylights in the rear of each room. Even in the coldest of weather, this allows me to always have a flow of fresh air, over each flight. The whole massive structure of this aviary acts like a “battery,” and even if I were to open all windows wide open in the middle of a winter night, as soon as I closed up the structure, it would be back into warm temperatures shortly.

In such a year-round warm environment, I have to be very diligent in keeping aviaries cleaned. If I go more than 10 days without cleaning each flight, I will get literally swamped with flies. Try as I might, there seems to always be one stray fly inside that can willingly “repopulate” his species! Toucans have a very large soft dropping which is perfect for breeding flies. I must also keep the area around the food bowls clean, to keep bugs to a minimum, which can be host to several different internal parasites.

I do not use any chemicals inside, preferring to constantly dust a layer of Diatomaceous Earth to help control all insects. All the waste from the flights is composted and used to fertilize the plants inside. All water from the bows is swished out each day, and used on the plants. All aviaries are constructed with the birds well being in mind. If birds are comfortable in their surroundings, they are much more likely to breed. In all species of birds, it always seems the aviculturists that know their birds, name them, and offer more of a friendly, loving atmosphere do much better than those who have rows and rows of sterile flights with numbers on them. Breeding toucans, to me, is much more of an art than a science. Although I do have plans on increasing my flock size, I feel when you have to start hiring employees to do most or all the work, your production level, and the birds comfort level will both drop.

The first aviary that I have built using these methods has worked out well, and the birds are are reproducing well, and I have several more similar structures planned in future years. My initial experiments in my new aviary has my toucans in much smaller flights than most people use. My toucans are currently kept in flights approximately 6' wide, 7' high, and 12' long. My future buildings will allow larger flights.

Being very active birds, I would never advocate attempting to breed toucans in typical commercial Parrot breeder, “stack 'em deep, sell 'em cheap, chicken ranch type” standing cages, but toucans don’t require a 25' flight for success.
Ah, the Good ol’ Days.

Some of my favorite authors on softbilled birds of the 1950s, 60s, and 70s, although well intentioned, didn’t know what they were doing, and their misinformation doomed many toucans to die from Hemo. This information is still being spread. Walk into any mall pet shop, look through the books, and you will still find lots of the same old information being reprinted. “feed dog food and mice,” yikes.

Hemochromatosis

“Hemo,” is the disease that has literally wiped out hundreds, if not thousands of toucans in captivity throughout aviculture history, and it is only in the last several years we have a handle on this devastating disease. Although there is still controversy on Hemo, the bottom line in this authors experience is that it is dietary caused.

For years I had toucans dropping right and left to Hemo. Since the introduction of new Low Iron diets, I have not lost to Hemo a single bird that I have raised myself, and which has never been exposed to high iron diets. Refer to the dietary section of this article for more info.

Although with most psittacines you can feed an inadequate diet, say, toss them a few sunflower seeds every day, and keep them alive for years, and maybe even breed them, not so with toucans. If a toucan is fed improperly, Hemo waits with an evil grin around the corner. The strange thing about Hemo is that a bird can look fine and act normal, then all of a sudden just “keel over” and that’s it. This is the main reason buying older toucans that have changed hands several times is so risky. You can look at them and they will appear bright eyed and bushy tailed, you take them home only to watch them all start falling off the perches. Just last year, against my better judgment, I found, and purchased a “young proven” (?) pair of Keel-billeds off the Internet, only to...
watch them both succumb to Hemo within weeks. I literally have a freezer full of “deal of a lifetime” toucans that have died from Hemo.

But, if you obtain a young, healthy, domestic Toucan, that has always been on a low Iron diet, and you keep this bird on a low iron diet, Hemo is a non issue! Such a simple thing, yet took us years to figure out!

Diet

As I just stated, for years the main cause of Hemo, in my humble opinion, was diet. This cannot be over emphasized. You must feed your toucans correctly! If you don’t, you will not simply have an unhealthy toucan, you will have a dead toucan! All the old books, recommended feeding either mynah pellets of the day, which were loaded with iron, or dog foods, same story.

Toucans don’t, unless feeding young, require live food for general upkeep. They need access to free choice fresh fruit, along with a protein source, which I use newly developed, every-batch-tested, Low Iron Softbill pellets. Always seek the lowest available, it is currently thought best to keep the iron at under 100 ppm, (parts per million) preferably, under 70 ppm. Many dog foods, and mynah pellets of today, and yesterday are well over this. Many supposedly “low iron” pellets have been tested by private aviculturists, and found to be far higher than the manufacturer promised.

Supplying your toucans with free choice fresh fruit keeps them happy, hydrated, and not ingesting the iron they would if they had only pellets in front of them. These birds in the wild survive on a nearly pure fruit diet, albeit different fruits than we supply in captivity. But this does show this is not a species than can do well on a 100% pelleted diet! Pellets are provided as a “side dish” to supply protein, vitamins, and minerals that our fruits do
Many people use papaya as a base for their fruit mix. I do not have year round access to Papaya, so I use melons and apple as my base, and replace the melon with papaya when I can get it. There are as many fruit mixes as their are aviculturists, and the exact mixture probably doesn’t matter as long as it is non-citrus. (Citrus is thought to help uptake iron absorption.)

The current mix fed to my toucans (along with the mynahs, toucanets, and aracaris), consists of 20% melon, 20% soft red apple, 10% frozen blueberries, 10% frozen mixed veggies, 10% grapes, the remaining 30% is whatever I have on hand in fruits, such as pears, peaches, apricots, plums, cherries, bananas etc., etc. Citrus is not fed due to a possibility of it aiding in the uptake of Iron.

The apples are washed well to remove any waxy coating, cored, not peeled. All seeds are removed from the melons, all frozen items are thawed. All is chopped into pieces about the size of small marbles. If large toucans are given larger chunks of fruit, they tend to fly away with it, hammer it on a perch, and waste a lot, and splatter a lot. I find with smaller chunks they will generally just do the standard “toucan toss back” and swallow it, no waste.

One particular thing with toucans, as with some other softbills, is that many of them right after they swallow a piece of fruit, will go to a perch, fluff up a bit, and actually look ill. It seems they need a few moments to let the piece of fruit slide down their throat, and start the digestive process. Many times right after feeding my birds, you can walk around the aviary and see many toucans all sitting on their perches fluffed up, looking like they are ready to die – only to be hopping around a few minutes later. They are actually just perching there, probably happy as all heck to have a nice piece of fruit in them.

Toucans use water mainly for bathing (providing they have proper fruit supplied) but they will drink some. Toucans with their large beaks cannot drink out of small water bowls. I use large dog crocks a minimum of nine inches across. These won’t tip over as the birds perch on the side and “dive in” for bathing. If your water quality is in question, high in iron, and other minerals, bottled or distilled water is recommended.

Breeding

Yes, toucans are being bred in captivity, but in very low numbers. Toucans tend to have a very short breeding season – in my situation, usually June, July, and August, and this combined with things such as egg eaters, egg throwers, baby eaters, etc., etc., make breeding them very challenging, and exciting (nerve wracking!!?).

Of course the first thing required is having a healthy, mature, sexed pair, (most large toucans can reproduce at two years, but seem to have more luck starting at three or four, and smaller species can breed at one year). Having a pair that gets along is important. Some species, and/or individuals will be aggressive toward their mate. Normally it is the male, but I have also had pairs where the hen was the aggressor!

Most toucans can be visually sexed by their beak size, males being longer – if the birds are mature. But there is always the occasional short beaked male sitting next to a long beaked hen that can sometimes make it confusing. All birds, therefore, should be either surgically sexed as some prefer, or DNA, as I do. Usually this just confirms my guess, but I have been wrong!

When first introducing new birds, you must keep a very close eye on them. That long beak when jabbing out can severely injure, and even kill its potential mate. Some of my pairs that get along fine when in their aviary, never would get along in large cages. Of the species I currently keep, Keel Bills are overall...
more aggressive towards their mates, compared to Tocos, Channel Bills, or Swainson's. When a pair has problems initially, I don't give up. I try all the "tricks" of successful aviculturists, such as "howdy cages" in a new aviary, changing something in the aviary, or simply separating and trying again later.

A suitable nestlog must be provided. Although the palm log is the most common, due to its plentiful supply for breeders in warm areas, and ease of hollowing out, I use pine, or aspen logs. A problem with palm logs is that the interior is so soft, many pairs will go all the way through very quickly. I search for local mountains for old downed trees, of a suitable size, then hollow them out with a chainsaw. I have to find logs that are just rotted enough to let me dig out the center, but they are still hard on the outside. I find that toucans are not very picky about size, shape, color, etc., as long as it is within reason. Most toucans in breeding condition will fly to and inspect any type log with a hole in it.

I use logs that have between 12 - 30 inch depths, and 4 - 6 inch square entrance holes. Interior is in the 8" - 9" inch diameter range for smaller species like Channel Bills and Keel Bills, and 10" - 12" range for the larger species, such as my Tocos, and Swainson's. The interior sides are left very rough to allow easy access to and from the bottom, which is always just a natural concave surface. Toucans do not use nesting material. In fact, they spend a lot of time inside pecking like drunken woodpeckers trying to chisel more out. On some of my pairs I must place a false bottom, chiseled from a hard wood, so they won't go all the way through. This obviously, would be disastrous!

Several signs will show up when your pair is getting down to business. Constant purring, the male will "cough up" bits of fruit or whole grapes and offer to his mate. They will both be in the nestlog a lot. They will lay 1-5 eggs, most common being 3-4, and take 16 days to hatch. The tiny helpless young, grow very fast, but the tiny little day old psittacid-looking pink blobs show no signs of the beauties they will soon become. Many pairs, due to stress, being too near other pairs, or other disturbances, will eat the eggs, toss them out, or eat the chicks. These are just a few of the challenging things about breeding toucans.

If all goes well, the larger species will fledge at approximately seven weeks, and be weaned around two weeks later.

Handraising toucans is a touchy, delicate art. I have been experimenting the last few years with this but, as of now, it is still a gamble pulling day-one chicks, or incubating eggs. If you have lots of psittacine experience, and really "know the ropes," incubating and hatching is feasible. Pulling chicks after seven days of parent feeding is the easiest way to guarantee success. Chicks are fairly easy to raise at this point. Many times I have been feeding day one chicks and they look fine and by day three or four they are history. Problems include bacterial, fungal, and non-absorption of the yolk sack. I hope, within a few years to have this down to a more exact science, but as of now, feeding day-one toucans is, in my opinion, a risky business. I have had grand success and heart-breaking failure.

Although the iron in most handfeeding formulas for psittacines is extremely high, it does not seem to affect a baby toucan's liver, as long as they are weaned off it at a very early age. This is probably due to the high iron needs of a growing chick. I make a mix using standard handrearing formulas, with a little applesauce, or other fruit added.

As baby toucans have no crops, you must be very careful feeding them. Aspiration is very common. You must be slow, let them swallow after each mouthful. Day one toucans need to be fed every 1-2 hours for around 16 hours per day, probably all through the night for the first few days helps. They can be switched to every 2-3 hours at a week. I usually go for between 10-20% of their body weight each feeding. In other words a chick when weighing 100 grams would get 10-20 ccs per feeding. The smaller chicks take a higher percentage, as they get larger, it drops closer to the 10% level. This is just a guideline, as each chick must be treated as an individual.

Weaning is a fairly simple affair. As soon as their eyes are open and they are starting to feather, start offering pieces of fruit and pellets with your fingers. Usually by the time they are fledged, they are already picking them out of the bowl. I watch the babies very carefully when stopping the handfeeding, as sometimes they will revert and require another week or two of formula.

**Notes on Some of the Species Bred Here**

Although this is yet a small sample of toucans in aviculture, these are some of the species I have personal experience with.
Toco

*Ramphastos toco*

The Toco is considered the “Rolls Royce” of toucans, along with possibly the Keel-billed. Tocos, as all large toucans, have become increasingly hard to find. I remember reading an article in *Cage Bird Magazine* in the 70s how to find Hyacinths at the time, “it was easier to lie your way into Heaven.” Well, the same could be said, about finding young healthy Tocos at a reasonable price in today’s market. This pretty much applies to any large Toucan, other than Swainson’s.

Tocos are the largest of all the toucans, (although I have seen some male Swainson’s that were probably just as big) but tend to have one of the calmer dispositions, compared some of the smaller species. A baby Toco will always stay sweeter with less work than a Keel-billed.

Keel-billed

*Ramphastos sulphuratus*

The Keel-billed is probably the most popular species I raise. This is due to its multicolor beak, which is the closest to “toucan sam” as it comes! Keel Bills have always been hard to find, as even during the heyday of imports in the 80s, none were brought in. Although I love reading in Bates and Busenbark’s book that in the early 60s Keel Bills were “inexpensive, and quite prevalent,” that was before my time, and man, have things changed!

Keel Bills are notorious to going down with Hemo. A high percentage of every older Keel Bill I have obtained has gone down from this disease. But as with other species, kept on proper diets, they can be very hardy birds.

Swainson’s, also called

*Chestnut-mandibled Toucan*

*Ramphastos swainsonii*

Ahh, the Swainson’s Toucan. Such a highly coveted, and sought after bird, very rare, even back in the 60s when Tocos and Keel Bills were a “dime a dozen.” Then a few years back, they were left off CITES, and some started coming into the US. Several importers are still bringing them in, and they are now the only large Toucan in plentiful supply at a reasonable price. They are gorgeous birds, and if handraised they tame up nicely, but they have a huge drawback, compared to their Toco and Keel Bill cousins. In the toucan world, there are “croakers,” and there are “whistlers,” and yes, dear reader, unfortunately, Swainson’s fall into the latter category! And do they ever! Swainson’s can literally drive you nuts if you keep them in a pet environment. While Tocos, Keels, and other “croakers,” have a frog like croak, the “yelp” of a Swainson’s is part whistle, part scream, and can be quite annoying. The only other toucan that is found in the US that is in the “whistler” category, is the Red-billed.

Swainson’s, although being in current plentiful supply in the US, have never been bred much. Most, if not all, young “handfed domestic” Swainson’s Toucans are imports. Unless the bird has a closed band, (and few if any were bred in the US in the last year), take my word for it, when finding Swainson’s, they are more than likely imports.

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Channel-billed
*Ramphastos vitellinus*

The Channel-billed was one of the most common and cheapest toucans in the 1980s. Now they are extremely hard to find. With their black beaks, and colorful chests, they are a very dramatic little beauty compared to Keels and Tocos. I have had people whom have never seen a toucan say they are the prettiest birds I have.

**Various Toucan Notes**

**Sleeping**

One interesting thing is the way toucans sleep. They tuck their long beak into their wings, with their head turned, but the really funky thing about it is that their tails stick straight up! I always chuckle when I walk into a room of sleeping toucans, looking like some dead birds a drunk Taxidermist has been working with!

**Biting**

Although toucans can't really bite hard compared to a psittacine, they have a style of shaking their head very viciously that can cause a bit of pain should one have you by the finger. Even my tame baby toucans are never on my shoulder, and I keep them away from eyes, ears, and most important, the nose. Once you have your “beak” tweaked by an angry Toco, you'll never again give him another chance.

Toucans can at times be host to several different internal parasites. It is advisable to have fecal samples taken at least twice a year to keep an upper hand on this. Although catching up, and de-worming toucans is not my favorite chore, sometimes it is a must to keep the birds in prime health.

**The Deadly Screw**

These buggers love any-thing shiny, such as nails, bits of wire, screws, or any small sharp piece of metal. And they will play with them, toss them around in their beak, and sometimes, with deadly consequences, swallow them. Recently I lost one of my best Keel-billed hens, when a 1-inch drywall screw fell into her aviary. All Toucan cages, or flights must be closely inspected, and watched for any loose metal objects. Swallowing something harmful is the most common cause of accidental death in captive toucans.

**Lifespan, Age**

**Determination**

Since it has only been a few short years since the Hemo problem was solved, we don't have a lot of data concerning lifespan of toucans. We do have the occasional 25 year old bird hanging around here and there so it is thought that 20-25 years is a good guess. I would say any toucan that is 15 or older is on borrowed time, especially if it is an older import.

It is very easy to pick out baby toucans, especially in species such as Tocos, and Keel-billeds, as their beaks are much less colorful, and are shorter than that of an adult. Once the bird is mature, it becomes very difficult to tell the age. If I see lots of overlapping beak growth on a bird, I would suspect it to be an older bird, but it can be a very difficult guess. I currently close-band all my babies, and keep detailed records, so in the future I will know the exact age, and bloodline of every toucan I ever produce. This is something that has been sorely lacking in many toucans bred in the US, and has led to a lot of inbred birds floating around.

**Advantages, Disadvantages to Keeping Toucans**

**Pro:** While building aviaries for most larger psittacines requires a complete metal frame, toucans, being non-chewers, can be kept in much “flimsier” quarters, especially indoors, when predators aren’t an issue. I love the fact with
toucans you can simply grab a 2 x 4, a hammer, and get on with building aviaries, unlike the welding, and hard to handle heavy gauge wires the larger psittacines require.

Although some species of toucans have a call that is a bit noisy, compared to most macaws, cockatoos, and Amazons, toucans are far quieter. And if you don’t have the whistlers, it isn’t bad at all – just croaking and purring (sorry, Swainson’s and Red-billed lovers). When I recently sold my last pair of macaws, after a lifetime of being “used to” their noise, it was quite a shock walking around the aviary without earplugs and being able to hear myself think for once.

Con: Everything isn’t all rosie in Toucan Land, though.

To feed these seemingly always hungry long beaked bugs requires quite an expenditure if you have more than a pair or two. I would say it costs far more to feed toucans than psittacines, if you are doing it correctly, and especially if you don’t have access to the cheap fruit prices in areas like California. I know that you can currently get cases of the large Mexican Papaya in L.A. for $8-11, where here in New Mexico I pay $22. I also know that the Low Iron Softbill pellets I currently use, cost about three times what my parrot pellets cost!

If you see a guy checking out at Walmart with 50 sacks of frozen blueberries, mixed veggies, blackberries, cases of melons, apples, etc., etc., and shelling out hundreds of dollars several times a month, it will be me, another broke Toucan breeder, scraping the lint out of his pocket, trying to feed his hungry charges.

**Can Toucans Make Good Pets?**

This all depends on who is keeping them! We all have different lifestyles, and ways of keeping our creatures. If you desire a completely spotless eat-off-the-floor house, there probably isn’t any bird that will do for you. Yes, it goes without saying, any fruit eating bird can make a mess. But if you can sweep around the cage daily, mop once a week or so, it is manageable. Although I and many others have kept toucans inside in large macaw type cages, paying the money for a heavy wrought iron cage is overkill, and for a permanent home, any macaw cage is probably too small. Large finch type indoor aviaries would be superior, to where the birds can actually get a short flight back and forth from their perches.

Something in the 6’ tall, 6’ wide, and at least 3’ deep range would be more suitable than most standard size macaw cages. Toucans do not climb and chew on wire as most psittacines do, so you can use almost any light gauge wire for indoor enclosures, heck, in a pinch, even chicken wire works fine.

More important than the strength, or gauge of the wire is the spacing. Wild toucans are notorious for injuring their beaks when put into wire cages that they can get their beaks caught in. There is no perfect size, but you either need wire mesh small enough that they can’t get their beaks in, or big enough so they can get them out! I am using 1” x 1” lately and it works OK. The smaller sizes of wire can lead to some birds breaking the tips of their beaks off, while a size of say, 1” x 2” allows a slot that a bird can get its beak into and literally gouge out a “notch” in his beak – and possibly lose the entire beak. The more calm a toucan is, the less chance of something like this occurring. It most commonly happens to completely wild, newly imported birds.

Toucans, when handraised, can be very loving, affectionate birds. Once you have a tame baby toucan perch on your arm, purring softly as you caress his head, watch his eyes close in ecstasy, watch him playfully and gently take your hand and fingers into his beak, watch him catch grapes from across the room, have him fly to you from across the room begging to play, well, you just might become as big a toucan lover as I am.

Amado Summers, at the age of 41, has been involved with birds his whole life. From being involved heavily in the psittacine business starting in the late 1970s, including owning and running an Exotic Bird shop in Albuquerque, NM during the 90s, to now, working full time with his toucans, he anticipates many more years of aviculture success. Anyone who desires more information on toucans is welcome to contact him by e-mail at MrHyacinth@aol.com, or visit his website, at www.SummersBirds.com.

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