

plant. But each aviculturist must make his or her own decisions when it comes to planting an aviary.

The inhabitants of this flight cage consisted of the pair of Levaillant's Barbets, a pair Fischer's Turacos, a pair of Black-naped Orioles, a pair of Lilac-breasted Rollers and several singles. These included a Blue-crowned Pigeon, a Tawny Frogmouth, a non-flighted (rehab) Red-billed Toucan (Kita) and an ordinary white dove.

Within this flight I had placed a large smooth-barked palm trunk that was 31 inches in diameter. It was a proven nest for Toco Toucans in past years and I was hoping to soon acquire another pair of large toucans even if it couldn't be the Toco. The internal dimensions were 10 inches in diameter and 17 inches deep. I had no thought that this log would be used by anything other than a toucan.

I knew quickly that the barbets enjoyed the large flight. When I released them into it the male instantly flew to the topmost secure corner away from me while the female landed on a log within feet of my face. Their previous 10 foot flight was never entered except to feed. Now their new home, a walk-through flight cage, was a different matter. Wherever anyone went, Barbie was sure to follow.

After several months in the flight cage the female barbet began a behavior that was not too pleasant to humans. She began to land on one's arm and pinch the skin very tightly without letting go. This was not only annoying but was quite painful, as one had to physically remove the bird's beak from the arm. When she began to fly at people's faces, the problem became very serious. An eye could be damaged. Many a nose got pinched. So a verbal warning was given to all those entering the walk-through and warning signs were posted.

In the spring of 1996 the female began to disappear at times. Since she was always "in your face" I knew there was something going on. I could not find her at times and did not know where she was disappearing to until one day she appeared at the entrance of the large Toco nesting log.

I checked the nest and this pair of Levaillant's Barbets had drilled an addi-

tional hole only 2 inches in diameter through the bottom of the toucan nest. This tunneled in a slight curve and with my thin hands could feel something at the bottom. My first reaction was to quickly remove my hand as the tips of my fingers had felt a warm body or bodies that felt like baby mice. The instant reaction of removing my hand was in hopes of not getting bit by a mother mouse as I thought that this was a mouse nest. I crashed my elbow into a tree limb with the force of removing my hand in a jerky impulse.

It was only seconds later that I thought this might actually be a baby bird as just the tips of my fingers had touched something fleshy and warm. Why not a precocial bird that did not have its feathers instead of pinky mice?

With care I then took a flashlight to look into the nesting hole (within the larger nesting hole) but due to the curve in the narrow nest I could not observe anything. So down the hole went my hand again and this time I removed an approximately 10-day-old baby Levaillant's Barbet. I carefully photographed it and placed it back in the hole. There was only one chick and with careful observation I could see that both parents were feeding the youngster. Another photograph was taken a week later and then the chick fledged after approximately three to four weeks.

The fledged juvenile looked like its father. Both showed great amounts of yellow flecking and red edging. The tame female, however, is very pale in appearance and I do not know if this is an individualistic trait or a difference between sexes.

It is important for barbets (especially wild-caught) to have plenty of privacy and planted aviaries are the best. A natural log is ideal as courtship is solidified with the drilling of the nest-hole.

The diet given to our birds in the flight cage is made up of chopped (1/4 and 1/2 inch pieces) soft fruit (apple, melon, pear etc.), thawed mixed vegetables, cooked brown rice, soaked heat and serve soft food for parrots, and Moist & Meaty dog food in small cellophane bags. The birds also can always catch the natural insects and bugs found in an outdoor walkthrough flight cage and there are plenty. ➤

Calcium the Misunderstood Mineral

By Thomas P. Ryan, D.V.M.
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Another compound found in our bird's diet, calcium is still to this day a misunderstood mineral to many. Either we give too little or too much. This early article gives a very clear concept of calcium.

Calcium and phosphorus are two important minerals in the diet of birds. Calcium- and phosphorus-related problems are not uncommon in pet birds. The deficiency most frequently seen in pet birds fed an all-seed diet is of calcium. Calcium is required in greater quantities than any other mineral and its metabolism is closely intertwined with that of phosphorus and vitamin D.

Calcium is important for the following:

1. The major component of bone and egg shell;
2. Necessary for nerve impulses.
3. Heart rate and blood clotting.
4. Muscle function.
5. Metabolic processes.

Phosphorus is found in bone, egg shell, muscles and is important in the metabolism of fats and carbohydrates. Low calcium can be a result of several things including the following:

1. High phosphorus and magnesium in the diet.
2. Large amounts of fat (such as seen in high oil seeds).
3. Not enough calcium in the diet.
4. High intestinal alkalinity.
5. Calcium complexing with oxalates or phytates in the diet.

It is important to remember that the calcium-to-phosphorus ratio of seeds most commonly included in bird feed range from 1:6 to 1:37. The correct

ratio of calcium to phosphorus is 1.5:1 regardless of the species.

Metabolic bone disease (MBD) is a term used to describe a variety of pathologic bone conditions due to calcium-phosphorus-vitamin D problems resulting from incorrect diet or diseases of the kidney, liver, intestine, thyroids, parathyroids or bone.

Rickets is a form of MBD and is a disease of growing birds characterized by failure to deposit adequate calcium. In the strict sense of the word, rickets is due to a vitamin D3 deficiency; however, many people use the term to denote low calcium absorption. Due to the low calcium levels the parathyroid glands secrete a hormone, PTH, in ever-increasing amounts to compensate for this imbalance. This results in the condition known as Nutritional Secondary Hyperparathyroidism (NSHP). The signs of NSHP initially may be vague and may include the following: dull feathers, slow feather growth after a molt, feather picking, sleepiness, mental dullness, gastrointestinal upset.

In advanced cases there may be muscle cramps and involuntary wing flapping, eggs may be laid deformed or with no shell or there may be a complete failure to lay eggs. Seizures can occur and may be triggered by stress, egg laying, noise, sudden turning on and off of lights, or a meal with a high amount of phosphorus.

Treatment: The need for calcium is satisfied by taking in adequate calcium in the diet and by drawing upon the calcium depots (bone) of the bone (via PTH). Vitamin D alone should not be used in the treatment of NSHP. Vitamin D does not increase the intestinal absorption of calcium, but increases the blood calcium levels by taking it from the bone. In fact, prolonged vitamin D therapy will completely demineralize the bird unless the diet is corrected. The proper treatment is to correct any dietary problem and if necessary correct the hypocalcemia (low calcium) by injecting calcium glucomate in fortified 5% dextrose in saline into a vein.

Diagnosis of NSHP is done by a combination of signs that the bird is showing, blood tests and X-rays. The best prevention is a good diet no matter what the species. 



Photos by Sheldon Dingle

Above: The Southern California (Los Angeles area) State Coordinator in action. Joel Tatom enthralled the members of the East San Gabriel Valley Bird Society at one of their very well attended meetings. Tatom showed a video of Yellow-bibbed Lories and then discussed the AFA and brought away several new memberships. Below: These are some of the members of one of the newest and best bird clubs in southern California. They have all the virtues a club needs to be successful.

