

Stunted Parrots

by Joanne Abramson
Fort Bragg, California

Stunting is a problem frequently seen in aviculture today. Many aviculturists, for a variety of reasons, are not able to recognize this progressive and insidious development in their hand fed babies until much more serious problems have evolved. Stunted birds are most likely immunologically weakened and susceptible to infectious disease at a greater risk than normally developed birds. Permanent physical deformities may plague the bird for the remainder of its life including inadequate or deformed skeletal systems, beak deformities, inadequate psychological development, damaged or poorly developed internal organ systems, and questionable reproductive capabilities. This human induced metabolic condition is the result of one or all of the following reasons:

1. Nutritionally deficient diets
2. Insufficient amount of food:
Low volumes of formula
Inadequate numbers of feedings per day
3. Medical condition preventing the normal digestion and absorption process (low grade toxicity i.e. visceral and articular gout, vitamin D3 toxicity; bacterial and fungal infections [e. coli, candida], viruses i.e. Papova, and burned crops).

There are three stages of stunting:

Early stage: these birds are not being supported nutritionally (or possibly medically) to allow them to reach their genetically predestined size. If their condition is recognized in time, their deficient development can be corrected and they will continue to achieve their normal expected size. Early detection of stunting can be determined by experienced hand feeders who review their birds' weight records daily and compare them with previously recorded normal growth data for the species being hand fed. Unfortunately, inexperienced hand feeders may not keep weight records or have no data to compare their birds' weight. Consultations with other breeders who have bred the specific species you are feeding will be helpful to newcomers who otherwise might not have the ability to catch stunting in this early stage.

Intermediate stage: characteristi-

cally causes the head and feet to remain close to normal size with the body size affected. The body is stunted in both length and girth. The photo from the Emperor Valley Zoo in Trinidad is an example of the classic mature stunted bird — a mature Blue and Gold Macaw with a body the size of a medium Amazon. Most of the intermediate stage birds do survive. Not being adequately fed produces bone structure that does not reach its genetic potential and is often accompanied by distortion of the skeleton (see Hyacinth Macaw x-ray photo). The majority of this article will deal with this group of birds. The accompanying photo (courtesy of Brian Speer, D.V.M.) shows a grossly underweight Hyacinth Macaw that was 570 grams at 68 days old. This Hyacinth should have been over three times that weight (1500 to 1600 grams) by this age. The hand feeder sought veterinary care when he had observed a sudden onset of weakness and poor crop motility, both of which were the cumulative effects of chronic stunting. Although this is an example of Advanced Stunting Syndrome, this bird was rehabilitated and did not outwardly show the signs of stunting when it was weaned. Another example of intermediate stunting is the Lynn Dustin, D.V.M., photo of the Blue and Gold Macaws at 35 and 37 days old. They weighed 260 and 160 grams respectively. The 37 day old weighed less than the 35 day old due to a ventricular septal defect in the heart. Both birds gained weight on an improved diet. Many of the common characteristics of stunted birds, i.e. thin, bony wings, conical shaped head and abnormal feathering, are present in this photo.

Advanced stage: these birds are so extremely underfed that they are grossly deformed. Severe nutritional problems have occurred which might also be accompanied by opportunistic infections such as candida or E. coli. These birds generally die before the bird reaches the feathering stage. The photo of the advanced stunted Blue and Gold Macaw is a 21 day old weighing 34 grams; this would be normal for a 2 day old. Veterinarian care was not sought in time. This bird died the next day.

Internal skeletal distortion is shown dramatically in the Hyacinth Macaw x-ray in this article. The volume of food was not the problem with this bird. He was eight weeks old and weighed 1200 grams. Normal weight for this age would be in the 1390 to 1560 range. James Harris, D.V.M., describes the bird as follows: "This is an example of nutrition related osteoporosis. Insufficient calcium and vitamin D3 in the diet resulted in bone that was unable to support the weight of this rapidly growing macaw chick. The spinal column has collapsed as have the rib cage and sternum. The bird died of asphyxiation from its inability to expand its respiratory system. There were also fractures of the long bones."

Diets high in protein and/or vitamin D3 have been shown to be a problem in macaws. African greys need more calcium and vitamin D3. All current hand feeding diets are probably deficient or excessive in some nutritional area. Parrots are specialized feeders. Expecting one generic hand feeding diet to nutritionally satisfy multiple species of parrots is unrealistic. As more data is collected on optimal growth rates for *specific* species of birds, we will be able to tailor individual diets to match their specific needs. Commonly used generic diets do not attest to their nutritional value as much as to the incredible tolerance range of parrots.

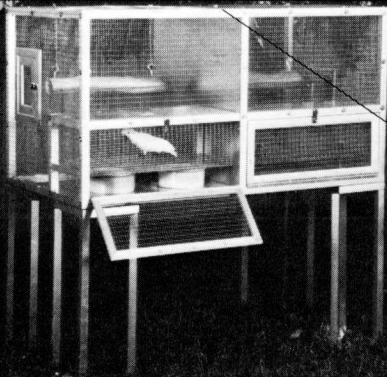
Watered down diets are just as much a problem as high concentrated diets. Thinning down diets with extra water or fruits and vegetables changes the nutritional basis.

Stunting can occur in any species, however, the likelihood increases in the larger parrots such as Amazons, cockatoos and macaws because of the larger volumes of food required for normal growth. In the hands of inexperienced hand feeders, these birds are often weaned many weeks before nature intended. For instance, 20 to 24 weeks is our average to wean a Hyacinth Macaw. But I've seen "weaned" birds that are 12 weeks old with the classic stunted macaw symptoms, normal sized head and feet with a small body size. This gives the appearance of a huge head, drawing attention away from the small body. Their weights were also less than expected for normal.

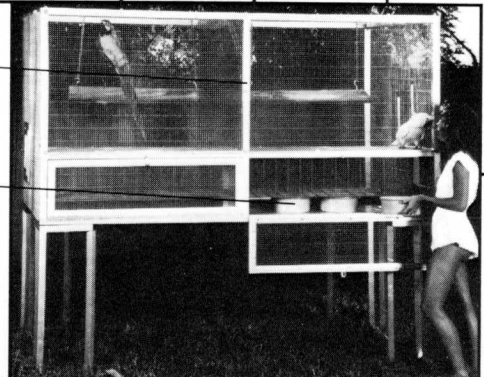
Manifestations frequently seen in stunted birds include increased activity levels; overly strong feeding response; restlessness in between

THE AVIARIES DREAM !

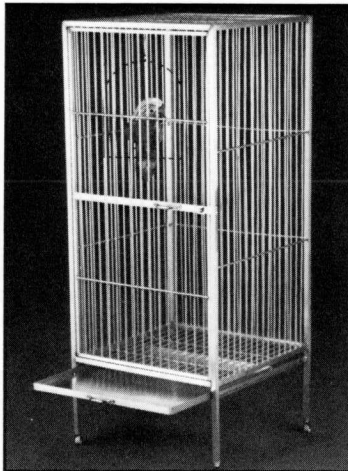
CUSTOMIZED ENVIROMENTS!



Mating distraction barrier, 2 sexed pair in separate private compartments. Exclusive "waste-free" feeding system - rain proof, rustproof, no escapes while you're changing food, separate compartments for food, water, vitamins, etc., easy-clean.



KEY WEST SOLID ALUMINUM ROD CAGE



24-1/2" X 30" X 40"

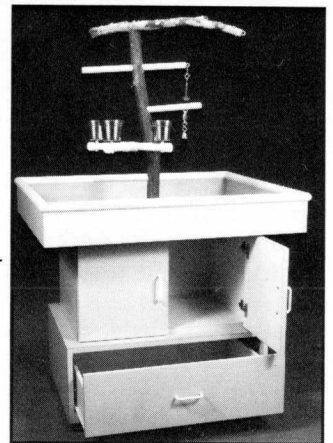
1/4" solid Aluminum Rod, rated 2 gauge, with casters and aluminum "easy clean" waste-tray. Ideal for macaws, cockatoos, and all larger birds.

PARROT PALACE

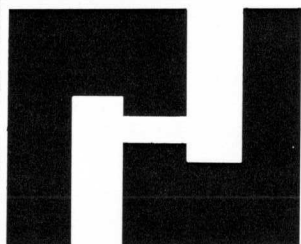
Tame Birds Love Their "Parrot Palace"!

You'll love having a quality piece of furniture to show your pet!

- Mica or wood veneer over plywood (match your decor)
- Drawer or cabinet for storage
- Any size & shape available



- T.I.G. WELDED ALUM.CONST.
- NON-TOXIC
- ALUMINUM ROD CAGES
- EXTERIOR CORNER CAGES
- CUSTOM BREEDING CAGES
- REPTILE/EXOTIC CAGES
- TRAVEL CAGES
- KNOCK-DOWN PORTABLE CAGES
- RABBIT BREEDER CAGES
- COLONY BIRD HABITATS
- PORTABLE AVIARIES

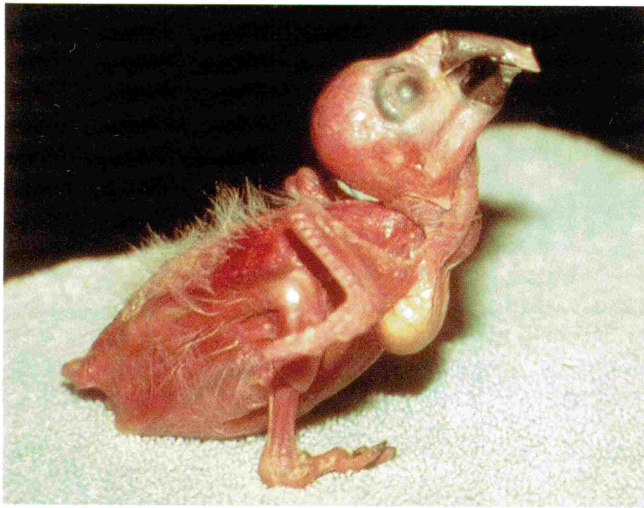


ENTERPRISES
Environments for
Birds and Animals

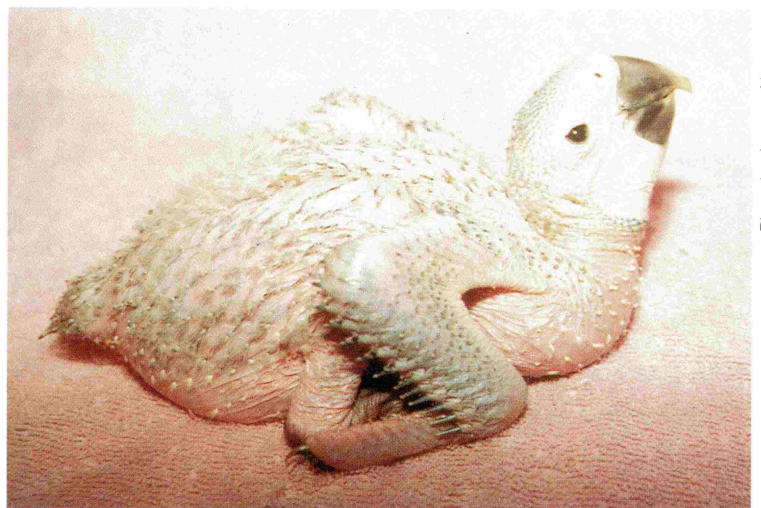
CALL FOR FREE BROCHURE

TO PLACE ORDERS CALL
813 - 522 - 1895

CALL OUR FAX DESIGN LINE
813 - 525 - 5680



Advanced Stunting Syndrome — Blue and Gold Macaw, 21 days old, weighing 34 grams.



Normal Blue and Gold Macaw, 21 days old, 500 to 600 grams.

feedings; lots of crying; signs of dehydration (reddened or dry skin); little or no weight gain and crop stasis; conical skull shape; thin, bony extremities (wings, legs and feet), [in advanced stages all toes will sometimes face forward]; primary wing feather development without corresponding contour feather development; pendulous crop. Multiple manifestations are likely to occur in one bird.

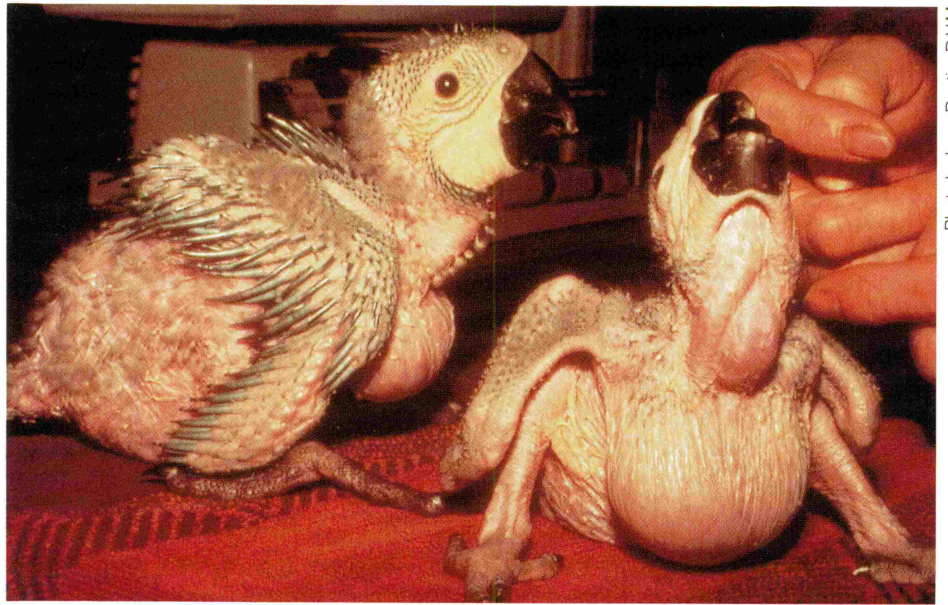
Handfeeders will often wait for the crop to empty completely. In my opinion, this is not necessary, parent birds in the wild would not wait to feed.

In stunted birds, dehydration is common as the bird's metabolism drains the liquid portion of the formula, leaving the hardened mass of undigested food behind. This mass will never empty out without fluid. It is frequently at this stage that veterinarians are called, not because hand feeders have noticed the stunting, but because they have noticed the food not passing.

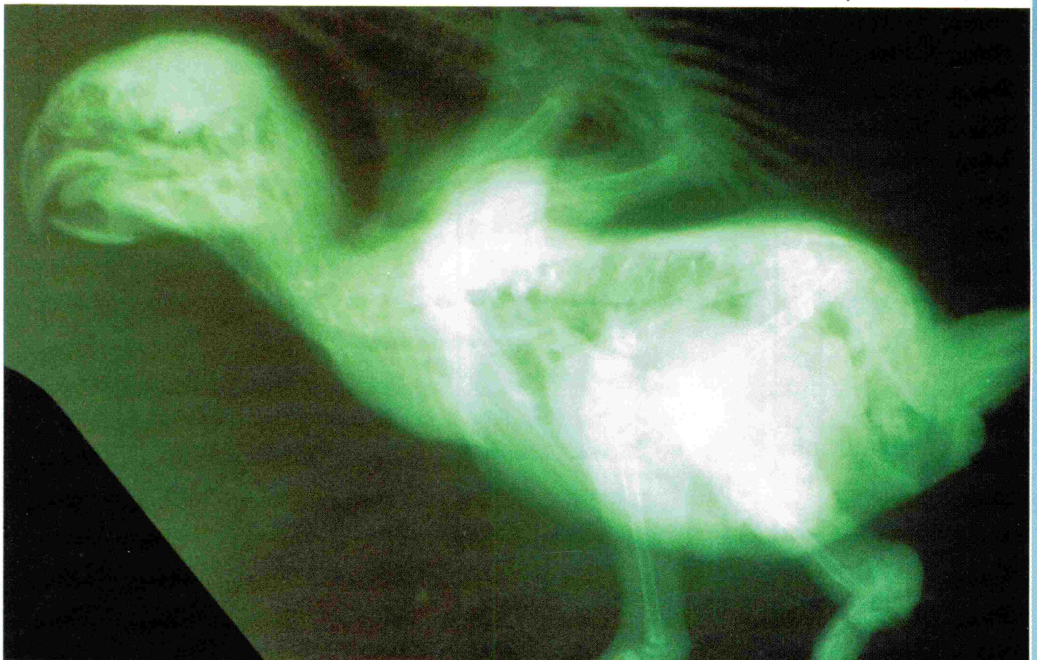
Normal babies sleep for most of the day. If they do wake up before they are fed, they settle down after feeding and sleep. Their skin is smooth and pale to light pink. The food passes through the crop within the proper period between feeding and the amount of food eaten is increased daily initially, leveling off when the peak weight is reached, then decreasing as the bird nears its weaned weight.

Stunted birds are genetically like any other bird of their species. Inter-

Nutrition-related osteoporosis. Myacanth Macaw X-ray. The diet was insufficient in calcium and vitamin D3.



Blue and Gold Macaws, 35 and 37 days old, 260 and 160 grams. (Normal weight would be 900 to 1,050 grams).



mediate to advanced stage birds that survive could theoretically be predisposed to the following problems:

Hens: these are the most susceptible to complications from their stunted condition. Since the hen will lay an egg that is controlled by genetics and not body size, she will be vulnerable to problems related to her smaller pelvic proportions; a normal egg despite her smaller pelvic size. Probable complications would include egg binding with subsequent severe kidney pressure and functional complications (leg paralysis, embolism stroke) pelvic proportions incapable of passing a normal sized egg. If eggs are successfully laid, her ability to incubate a clutch may be inhibited by her relatively small body size resulting in temperature fluctuations during the incubation period.

Cocks: they are likely to show less detrimental effects from stunting. The possibility of a low sperm level could not be ruled out. If sperm levels are unaffected, successful copulation should result in fertile eggs. The cock's ability to feed and care for the young would not be affected.

Stunted birds released back into the wild would probably have a harder time keeping up with their wild counterparts. These birds might be useful in a captive setting in the hope they could be used in a captive breeding program, or if they are unsuccessful at that, as a pet.

Captive hatched birds are not the only birds affected. Many of the baby birds taken from nests in the wild are hand fed incorrectly by the trappers. We saw many examples of this problem when, in February 1990, we traveled to Trinidad at the southernmost portion of the Caribbean. Trinidad is an island seven miles from Venezuela. Parrots that are confiscated from smugglers attempting to ship the birds to Asia, Europe and the U.S. are offered to the zoo. Many of the birds I saw in the zoo suffered from the stunting problem as the Blue and Gold photo shows. It is not surprising that the people raiding the nests have little knowledge of pediatric care. Think of the amount of English publications written on the subject that we have access to in the U.S. This information is not available to the trappers. None of the macaws at the zoo had ever bred, so information on babies produced was not available.

Since there is virtually no first-hand knowledge on how long parents feed

their chicks in the wild, we are continuously falling back on what limited knowledge we have by applying data from one species to groups of similar species. As accurate computer record keeping continues to be compiled, we will soon be able to establish normal weaning tables, which will be in ranges, for each species.

The best analogy I can give you about weaning is that it is much like a human baby's teething or toilet training. Each chick finds its own time. We do not yet know whether this is genetic, environmental or most likely a combination of both. Dale

Thompson once referred to what I call the *optimal weaning time* as a "window," this window being the most natural weaning time. Not the quickest, not the slowest. If this optimal weaning time is missed and the correct action is not taken, it is not unusual for macaws to still demand to be hand fed and be begging for food many weeks or months after the optimal weaning time.

Stunting is a relatively newly defined problem in aviculture. The majority of the birds thus far affected have not yet reached breeding age. Many of the questions this article raises will be answered over the next three to four years. In the meantime, I would recommend that stunted birds not be used for breeding purposes until more facts are compiled.

Weight records are essential to the care of baby parrots. Daily weight checks can prevent stunting. Losing weight or failure to gain weight (prior to the peak weight being achieved) should prompt a visit to your avian veterinarian to diagnose any potential problems. An unnecessary check is better than a dead or severely stunted bird. Networking with other breeders is also useful.

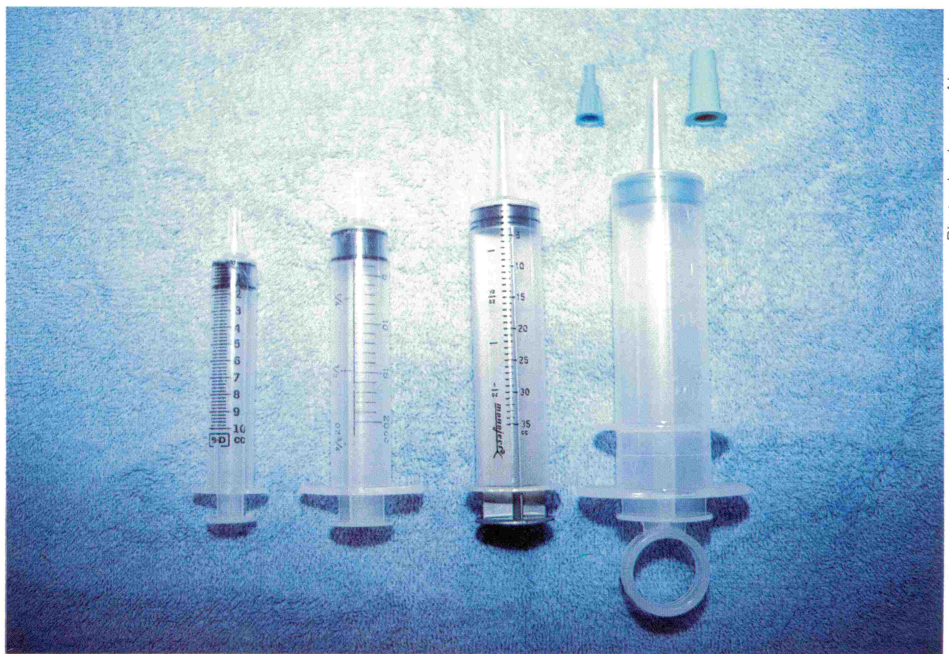
Acknowledgements

My thanks to the following people for their help in preparing the text: Brian Speer, D.V.M. for his invaluable time and energy reviewing and correcting the text; James Harris, D.V.M.; Chuck Galvin, D.V.M.

Brian Speer, D.V.M.; James Harris, D.V.M.; and Lynn Dustin, D.V.M., for the use of their photos. Also Dale Thompson and Laurella Desborough for their bird weight records. ●



Proper way to hold and hand feed youngster.



A variety of hand feeding syringes are necessary to suit the size of the young birds.