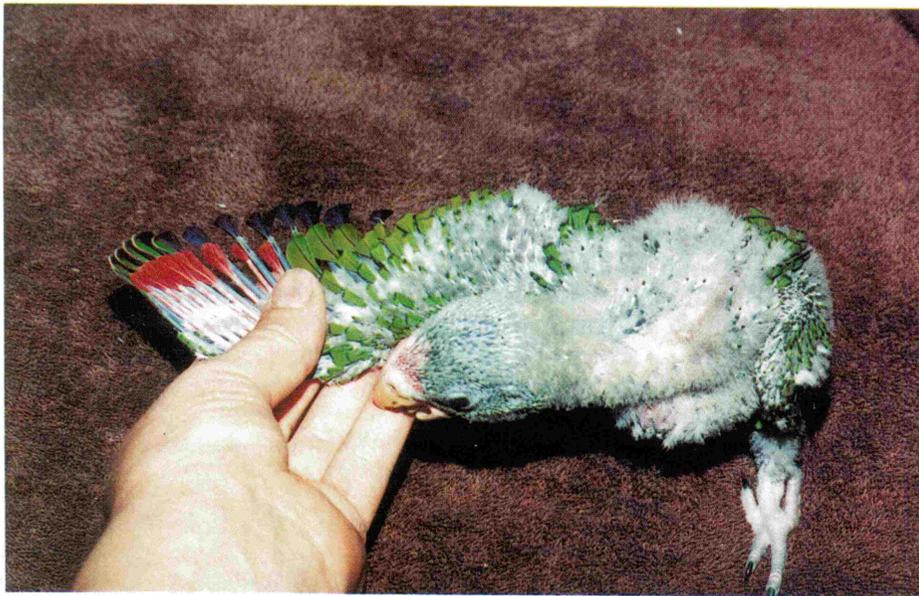


# Captive Maintenance and Breeding of the Tucuman Amazon

by Nicole VanDerHeyden, D.V.M.  
Lafayette, Indiana



Young Tucuman Amazon four to six days of age reared by the author.



Even at five weeks of age, red wing coverts are very visible on this Tucuman Amazon.



Adult pair of Tucumans, male at left.

Tucuman Amazons (*Amazona tucumana*) are delightful parrots originating from the Alder forests of the Andean slopes in southern Bolivia and northern Argentina. Tucuman Amazons are stocky parrots with petite heads and beaks. Their overall body color is dark green with each feather edged in black. The forehead is scarlet and the thighs are yellow-orange. The beak is pale yellow to horn. The primary coverts are bright red and there is no red wing speculum typical of most of the mainland Amazons. The primary feathers are dark green with cobalt blue tips. The tail is yellowish green. The number of red primary covert feathers may be indicative of sex as my five males have eight to ten red feathers whereas my three females have only four or five. Juveniles have green thighs and occasionally red tipping on the tail. Sexual dimorphism may be present in the juveniles as well, as all of our female offspring to date have only had a narrow band of orange feathers on the forehead and two to four red primary coverts versus the males which have had the solid red foreheads typical of the adults and seven to ten red primary coverts.

Tucuman Amazons have never been commonly imported into the United States. Miss Anne Kindler, a South American animal dealer, first brought these birds to the United States in 1977 when she moved here from Bolivia. Only three birds survived quarantine, all of which proved to be hens. A short while later, Ramon Noegel of Life Fellowship, Seffner, Florida was able to obtain a hen which was subsequently paired with an adult male imported by a New York dealer. This pair successfully bred in 1981 and produced one chick, earning a first breeding award for Life Fellowship. An article on this first breeding was published in the Oct/Nov 1982 AFA *Watchbird*. Tucuman Amazons were only sporadically bred by a handful of aviculturists

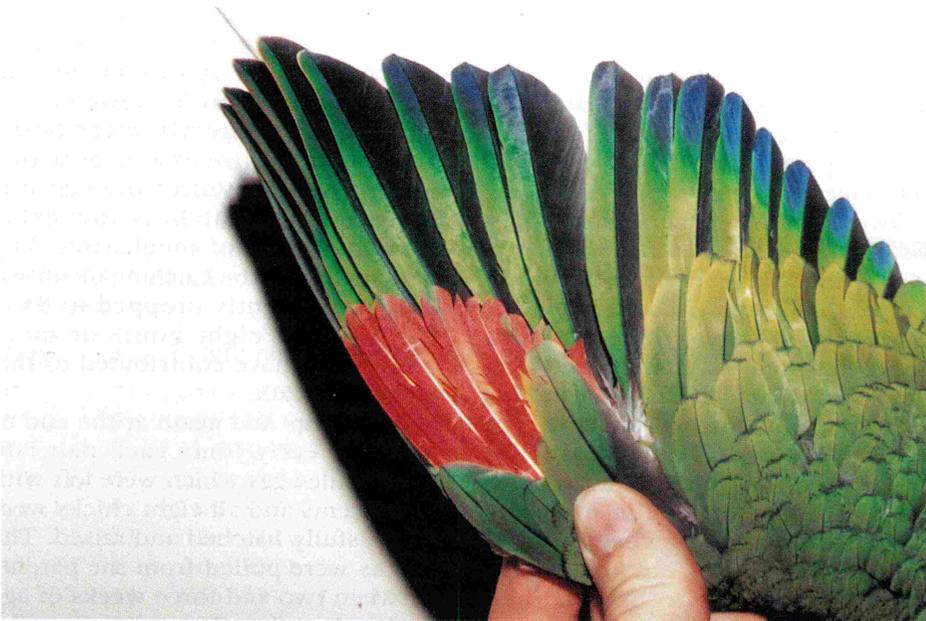
following this first breeding until additional birds were imported in the mid-1980s.

Since then the bird has become popular with aviculturists. In 1987, the Amazona Society recorded 54 pairs kept by its members with 17 chicks reared.

I acquired my first Tucuman Amazons in the fall of 1985. They had been imported as juveniles several months earlier along with Blue-fronted Amazons (*Amazona aestiva xanthopteryx*) and had suffered severely from pox during quarantine. Hopefully, the pox vaccine that is currently available for use during quarantine will reduce future losses from this often devastating disease. I purchased 12 birds of which only two were females when surgically sexed. Subsequently, one of the females died

from a bacterial septicemia related to the disease problems that occurred during quarantine. Two additional females were purchased in 1986 from private individuals who had kept them as pets for a short period of time. Prior to introducing them to my aviary, the birds are quarantined at a separate facility for a minimum of 45 days and often as long as six months. During this time, they are tested for bacterial and viral infections and treated with medicated pellets for psittacosis. The long quarantine period is necessary to prevent diseases such as papillomatosis, tuberculosis and proventricular dilatation syndrome from being introduced into the main collection. They are also surgically sexed, even if they have been sexed prior to purchase. This allows me to get a good look at their

Photos by Nicole Van Der Heyden, D.V.M.



Red covert feathers of the male Tucuman.



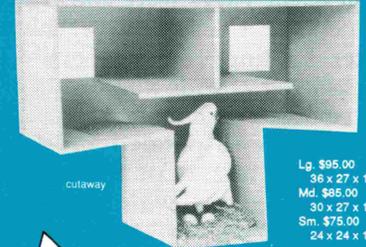
Red covert feathers of the female Tucuman.

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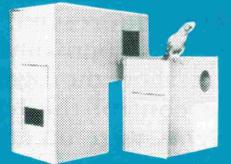
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organs and the condition of their gonads. This time is also used to convert the birds to a pelleted diet and to introduce them to a wide variety of fruits and vegetables.

The five males and three females were set up together in a large flight in the fall of 1986 and allowed to establish their own pair bonds over a period of one year. In the fall of 1987, the three pairs that had formed were set up indoors in individual breeding cages. The cages were constructed of 1" x 1" (2.5 cm x 2.5 cm) galvanized after welding, 14 gauge welded wire measuring 2' wide x 3' high x 4' long (60 cm w x 90 cm h x 120 cm l). The cages were suspended 3' (90cm) off the floor. In May of 1988, the pairs were moved to 2' wide x 2-1/2' high x 3' long (60 cm w x 75 cm h x 90 cm l) cages with a 3/8" (1 cm) plywood nest box measuring 12" wide x 12" long x 24" high (30 cm w x 30 cm l x 60 cm h) hung on the outside of the cage near the rear. Six inches (15 cm) of pine shavings were placed in the nest box. Solid dividers were hung between the cages although the birds could still hear each other and observe other species of Amazons across the aisle. Pine 2x4s were used as perches.

Lighting was provided with two 40w fluorescent light bulbs suspended approximately three feet (90 cm) above the cages. A timer was used to control the length of time the lights were on and this was varied from a low of nine hours in December and gradually increased to 16 hours in May. There was also a 7w incandescent night light burning continuously in each room. Humidity ranged from 55% to 95% relative during the spring and summer. The birds were misted twice weekly using a hand sprayer. The temperature varied from 45°F in January to 105°F in August.

The parrots are fed primarily a pelleted food made for poultry (Purina Meat Builder, 20% protein, 4% fat) via a 4" hopper attached to the outside of the cage. The pellets are manufactured locally and generally used within one month of purchase. In addition, they are offered a variety of fruits and vegetables on a daily basis including apples, oranges, grapes, carrots, yams, celery, cabbage, kale, potatoes, broccoli and cauliflower. Cooked rice, beans and corn are also given. Fruit and vegetables are fed on small paper trays that are inserted into the cages through a small access door.

When the birds are finished with the food, they enjoy playing with and tearing up the paper trays. This reduces the amount of labor required to wash food bowls and there is no chance of cross contamination between cages via the food dishes. Water is supplied with a quart glass water bottle and 5/8" sipper tube. Water is changed twice weekly and the bottles are disinfected in bleach. No vitamin or mineral supplements are used.

My three breeding pairs of Tucumans are moderately noisy and active parrots. They fly from perch to perch despite the small size of my cages in which most of my Amazons prefer to climb. They keep up a constant chatter whenever I am in the breeding room and bob their heads excitedly when I approach. All three pairs will copulate in my presence and when one pair begins the others will usually follow. Afterwards, the females would often fly to the rear perch near the nest box and beg for food from the males. The females appeared to do all of the nest box preparation as the males would only enter if frightened.

Two of the three pairs went to nest in June 1988, approximately six weeks after being set up in the breeding cages. Three eggs were laid by both pairs at two to three day intervals. All six eggs were removed after ten days of incubation and candling proved them all to be infertile. The hens were remarkably calm for Amazons when the eggs were being inspected. Normally I'm in fear of losing several fingers when trying to inspect nest boxes but these pairs made no attempt to defend their boxes. Instead, they chattered nervously and fidgeted nearby.

Both pairs produced second clutches in late July and early August 1988. The first pair laid three eggs of which two were fertile while the second pair laid four eggs of which one was fertile. One fertile egg from each pair was pulled and set in a Marsh Turn-X incubator at approximately ten days of development. The remaining fertile egg was left with the hen who hatched and raised it successfully. The eggs were incubated at 99.6°F and 55% relative humidity. The incubation period was between 26 and 27 days and both chicks hatched without assistance. Two days after hatching, one chick appeared weak and failed to gain weight. An antibiotic (Piperacillin 5 mg) was injected into the hatch muscle at eight

hour intervals and subcutaneous fluids were administered but the chick succumbed on the third day. Necropsy revealed a *Pseudomonas aeruginosa* infection of the yolk sac. The remaining chick was successfully raised. Both 1988 chicks were surgically sexed as males and were sold as pets as there was little demand for males among breeders.

In 1989, the pairs were set up in the identical cages, however, the nest boxes were changed to horizontal boxes measuring 18" long x 12" wide x 16" high (45 cm l x 30 cm w x 40 cm h).

The first pair laid four eggs in April and the second pair laid four eggs in May. All of the eggs were pulled after ten days to encourage the pairs to double clutch. All of the eggs were set in a Marsh Turn-X incubator at 99.5°F. Humidity was not monitored with a hygrometer that year but rather the rate of egg weight loss was used to determine the need for humidity. All eight eggs were fertile; however, one embryo died shortly after being moved to the incubator and one embryo was lost after the egg was moved to the hatching incubator around day 24 of incubation. The temperature in the hatching incubator had inadvertently dropped to 94°F for possibly eight hours or more which may have contributed to this embryo's death.

Both pairs laid again at the end of May and early June. Each pair laid four fertile eggs which were left with the parents and all eight chicks were successfully hatched and raised. The chicks were pulled from the parents between two and three weeks of age for hand feeding. The chicks from the first clutch were sold prior to sexing, however, the second clutch contained two females and six males.

Initial egg weights of the eight incubated eggs ranged from 13.9 to 15.8 grams with an average of 14.5 grams. Hatching weights of seven chicks ranged from 10.6 to 12.2 grams with an average of 11.2 grams. The chicks were born with very long white down covering their entire bodies, unlike the nearly naked typical Amazon chick. This may be a reflection of the cool and mountainous habitat from which they originate. Between two and three weeks of age, the secondary down appeared. It, too, was very thick and grey compared to most Amazons. The chicks were extremely active and easy to feed. They were started on a mixture

of ground dog food (Hill's Science Diet Canine Maintenance 22% protein), 13% fat and 0.5% calcium), pureed sweet potatoes and water. The first feeding consisted of six parts water to one part each of dog food and sweet potato. The amount of water was decreased in each subsequent feeding until a mixture of two parts water and one part each of dog food and sweet potato was being fed at three days of age. Over the next week, the sweet potato was gradually eliminated until only one part dog food and two parts water were being fed. This was continued until weaning. The chicks were weaned starting at six weeks of age by offering cooked corn, rice, vegetables, breakfast cereal, pellets and apple. Most weaned between eight and ten weeks of age.

The chicks were fed every two to four hours the first week, then every four to six hours after that. They were initially fed with small, plastic pipettes or 1 cc syringes. Larger syringes were used as they grew up. Brooding was done in a human infant incubator or a commercial transport incubator (WarmWorld). Chicks were maintained at 95°F the first week then decreased approximately 5°F per week thereafter. Weight gains are given below:

Day	#	Weight range	(average)
0	7	10.6 - 12.2 g	11.2 g
4	5	18.8 - 20.1 g	19.1 g
7	7	32.5 - 39.9 g	37.4 g
10 - 11	7	47.2 - 62.5 g	52.9 g
14 - 15	7	71.0 - 89.7 g	85.4 g
20 - 22	13	105 - 131 g	118 g
28 - 29	13	169 - 227 g	193 g
35 - 37	13	266 - 291 g	276 g
42 - 44	13	291 - 315 g	301 g
weaned	8	244 - 274 g	266 g

I know of at least six other aviculturists in the midwest United States who have raised Tucuman Amazons this year, suggesting they are relatively prolific birds compared to many of the other Amazons in captivity. The two females produced to date have been retained for future breeding while most of the males have been sold as pets. The two males from 1988 have proved to be excellent pets. They are both extremely talkative, lively and playful. Their owners love them dearly. It appears this Amazon should become more available in the future through captive propagation by aviculturists who discover what delightful parrots they truly are. ●

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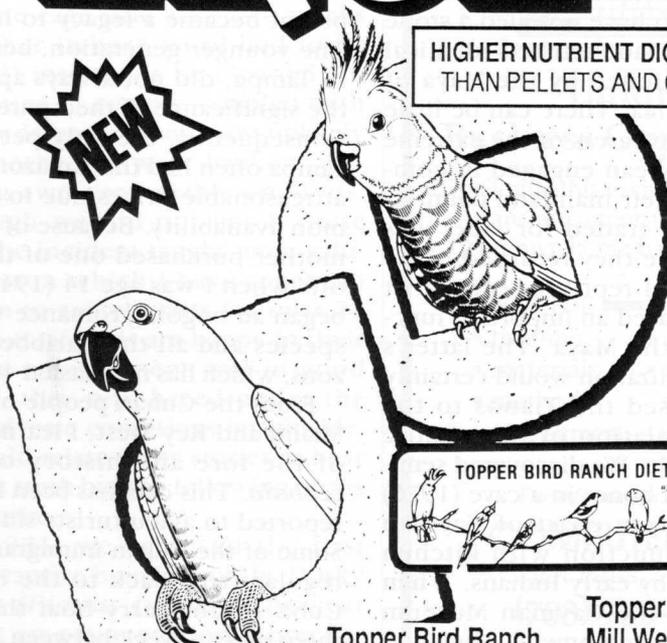
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