

# Hoffman's Conure

## *Pyrrhura hoffmanni* an Avicultural Success Story

by

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### Introduction

**D**uring the summer of 1997 I didn't know what bird-babies Dale Thompson would show up with next for me to handfeed. It was always a big surprise to have him drive up, fling the truck door open and let me have the first look into all the little cardboard boxes he put the babies in for their trip to my house. Gingerly carrying the boxes upstairs, I would carefully peek in each one of them. I was always eager to see what wee squirming wonders nestled in wood shavings he was bringing me. For a baby-bird lover such as I am, it was like Christmas every time he arrived with babies in tow.

That year saw a lot of baby bird species cross my doorstep from Dale, but he consistently brought Hoffman's Conures every trip. Some were feathered, some were week-old tiny little bumble-bee sized, and the middle sized ones looked like Eskimos with fluffy down snow-suits on. He would take them from the nest and head directly for my house. Some ate pretty well after the three-hour trip, but most took about 24 hours to develop an enthusiastic feeding response. From then on they were truly the "eager eaters" among the baby population here.

They grew like little weeds and weaned very quickly at 50 to 60 days. Even though Dale warned me not to socialize them, it was too much of a temptation to cuddle and scratch their heads. All the time I thought, boy would they ever make terrific pets. Cute as a button and inquisitive, they followed me around the house flying after me to use my head or shoulder as a landing destination. They are much

quieter than some of the other conures.

They also made very exotic, expensive bed-warmers for a hen *vosmaeri* Eclectus I was handfeeding at the time too. Because I hate seeing a baby all alone in her Tupperware-bassinet, I put in a couple Hoffman's that were almost the size of the Eclectus for safety reasons. They matured a lot faster than the Eclectus so in a couple of weeks I selected two more that were smaller and switched. The hen Eclectus went through three sets of Hoffman's bed-mates before she was feathered. Babies that age don't realize they are from different continents and species. They just know it is darn good to have a buddy to cuddle up to. The last odd-mix trio lived harmoniously, eating, playing, and snuggling together for over a month until the Eclectus was adopted.

As months flew by I would periodically trade Dale fully weaned Hoffman's Conures for still another clutch of tiny ones. By fall he informed me I had weaned 26 Hoffman's that season – delightful, animated little green creatures that I had lots of fun with.

In a recent interview with Dale Thompson, he gave me the background of his experience with the Hoffman's Conure, since they have been in this country.

The Hoffman's Conure is one of the *Pyrrhura* conures found in Central America. It originates in the very north-western part of Panama and the Southern part of Costa Rica. It has never been found legally in captivity, mainly because Costa Rica has not allowed export of its natural wildlife since 1980.

### History

After the export ban in 1980, the only way any birds could be exported out of Panama was if export permits were acquired within Panama prior to the ban. A permit was needed from R.E.N.A.R.I., which is an equivalent to our US Fish and Wildlife Service. This was especially important for any military personnel serving in Panama. They had to have this permit prior to leaving if they were taking out any animals. Many people at the military base had conures, macaws, and especially the Panama Amazon in their homes. If they obtained this permit they could

later export their pet bird legally after 1980. All commercial shipments, however, were eliminated by the ban of 1980.

In 1980, Dr. Nathan B. Gale, was Chief Veterinarian in the Panama Canal Zone. This was a private sector enterprise that worked with the army.

In March of 1980, 36 Hoffman's Conures were exported out of Panama, from Nathan B. Gale to a large USDA approved quarantine station owned by Gerald Schulman. This was the only group that has ever entered the U.S., let alone, the rest of the world. Upon release, these birds were distributed among three aviculturists. One had a single pair and the others were divided between two aviculturists in Arizona. It was during this time (1982) that Chris Rowley, an aviculturist living in Arizona, achieved a first breeding of this species.

After about a decade, the interest in the Hoffman's among the aviculturists had died down. By 1992, the original population of 36 had been reduced to a total of 11 specimens. All 11 birds were shipped to Dale Thompson in California.

The birds were all shipped in one container and there weren't any records. Not much was known about them except for bands, which showed which were wild caught, (the founder stock) and which were the captive-bred youngsters. There was a known reproducing pair within this group. Laproscopic examination revealed seven males and four females.

After they had been laproscoped all of the birds were all placed together within a big flight. We had hopes that we could observe the breeding pair quickly by their behavior. As it was, it took only three days to observe which was the "good" pair as they showed a very close bond by always perching next to each other. This breeding pair was then removed from the main group and we watched for further bonding among the remaining nine birds. An additional pair was observed showing close bonding and a second pair showed a loose-formed bond. From this limited beginning, we decide to form a Hoffman's Conure Breeding Consortium consisting of



*Young Hoffmann's Conures. A large number of these rare birds were bred by Dale Thompson with many of them being handfed by Susie Christian.*

five original members.

During the first year we were just trying to get reproduction from any of the pairs because our total numbers had been drastically reduced. With 11 total birds we knew the value of acquiring as much genetic diversity within the offspring. That first year, however, we just needed numbers; so we reproduced as many offspring from the formed pairs as we could get. As irony would have it, one of the pairs took off and bred most of the youngsters. This was the very first pair that had been removed from the group.

### Genetic Diversity

Inbreeding is done in aviculture for certain reasons mainly to exaggerate certain traits within a species. One example is to produce and maintain a certain song within roller canaries or to line-breed offspring to acquire consistent form, color or size. This is done to a great extent with Cockatiels to acquire a new mutation or to maintain or improve a mutation color.

When it comes to reproducing rare birds, the opposite approach must be taken. Utmost care must be taken to *avoid* inbreeding. As any population becomes more inbred, the offspring tend to become less fertile and many physical abnormalities begin to show up. When birds found in the wild or in captivity are in great numbers, there is a large genetic diversity within that population. Genetic diversity insures that a

species will survive when catastrophic environmental conditions occur (hurricanes, etc.) or when medical disasters occur. This last is especially serious within rare captive populations.

Our challenge was to determine how to improve the genetic diversity within a species that contains very small numbers. To accomplish this, we began communicating with Dr. Phil Ryan, and Graeme Phipps from Australia, two very good practical genetic experts. The concept for acquiring a large genetic diversity within the offspring is to reproduce all individual birds of one sex to all of the birds of the opposite sex. A minimum number needed for good genetic diversity of any species held in captivity is six unrelated pairs. The concept being that all six pair would reproduce.

Let us use an example of two unrelated pairs of birds (Male A, Female B, Male C, Female D) the breeder has the choice of reproducing them in only two combinations to keep all of the lines pure (representing each combination of parent bloodlines). This would be from breeding A x B, C x D or A x D and C x B.

The best way to keep maximum genetic diversity within a captive population is to continually breed unrelated stock with each other. When this is impossible due to the lack of numbers, it becomes important to reproduce *every* bird with *every* combination of mating.

If it were possible to reproduce the six pairs of birds, for every possible

combination, there would be six possible combinations for the first male: (A x B, A x D, A x F, A x H, A x J, A x L, etc.). The result of this kind of reproduction is that all offspring somewhere down the line would eventually have a combination of every founder stock member's genetic material thus creating a "Maximum Genetic Diversity" population within the species.

This way, all of the good genetic material would be maximized while greatly reducing any negative genetic material such as physical abnormalities or mutations. This is the opposite of inbreeding and our consortium's goal was to keep away from any physical abnormalities or mutations. Toe, leg, and eye abnormalities, along with color changes, are a few of the early problems first occurring within birds that are line-bred or inbred consistently.

### Reproduction

Within the Hoffmann's Conure Consortium, we had seven males and only four females. The best combination would be that every one of the four females would successfully reproduce with every one of the seven males. One of the biggest problems facing the consortium was that two of the founder males were in captivity for 16 years and they were acquired as adult birds. It was very likely that these old birds would not breed as they were well past the ability to reproduce successfully.

After successfully reproducing the first excellent breeding pair, the female was then paired with other males. The first change in mates was with one of the old 16-year plus males. This "B" female did reproduce one year with this old male but he died of old age the following winter. The other ancient male was paired with every female over a period of four breeding seasons and every single egg laid was infertile. The genetic material so needed from this male was never obtained.

We decided to parent-rear as many of the birds as possible after the first year. The first year we handfed and the second year (unless we had a problem baby, which was very seldom), we allowed the parents to raise their own babies. By doing this, we did not have double or triple clutching that often

occurs with breeders of *Pyrrhura* conures when they hand rear all the youngsters. Most of our early clutches contained only two to three eggs. There were very few three- and four-egg clutches. *Pyrrhura* are noted to have 6, 7 and 8 eggs – large clutches. We never achieved these numbers with the Hoffmann's Conures.

All offspring were held back for future breeding and mates were chosen for each pairing to follow the above formula to maintain long-term genetic diversity. The early going was very difficult for several reasons. With the adult birds, we moved each reproducing female over one step to another male. Bonded birds often are reluctant to reproduce with another mate immediately. Two of the founder females reproduced very well, the first being exceptional.

The third and fourth females did reproduce but they often waited two years to reproduce and several times they were reluctant parents bringing off only one offspring.

The second problem was the ratio of

Photo by Susie Christian



*The Odd Couple. These youngsters – a vosmaeri Eclectus and a Hoffmann's Conure – were handfed together and became buddies.*

produced offspring. The first two years produced 14 males and three females. This was a very lop-sided ratio. We had to set aside so many of the early males as mating them would have caused inbreeding problems we were trying to stay away from.

Production started very low, as we didn't have as many females as we needed. The ration of female to male offspring during the third and fourth year's production increased greatly. The fourth generation offspring was the first time that we produced more females than we did males even if it was by one individual. By 1998 all of the founder stock had died.

Our pairs, after four years, were now beginning to reproduce two- and three- and four-egg clutches and the babies, we were glad to note, were consistently bigger in size and weight.

During the early formidable years, we followed closely the genetic formula used by the consortium. It was during the fifth year that we decided to put the original males into the equation. These were 14 males (from the original "good" breeding female) that had never been used for breeding.

These birds were four generations down and we were informed by consulting geneticists that after this many generations, this would not increase the negativity of inbreeding. What we

were *not* looking for was mutations. That was one thing we did not want, because we would then be dealing with inbred birds.

We took these four- and five-year old males and paired them with one-year old females. For the health of the young females, we originally agreed not to breed them until they reached 18 months of age. By the fifth year of the consortium, however, the youngsters were laying eggs in their feed dishes at 12 months of age, so we decided to give the young pairs their nest boxes earlier than previously done.

These four- to five-year-old males turned out to be very good breeders. They had excellent fertile clutches and were consistently the best parents of any of the pairs within the consortium. We believe this was due to their maturity and being mostly parent-reared. They were also housed together during the previous years in a very large flight and were very socialized.

By 1997 our production evened out, sex-wise. The following year the consortium actually had four extra females. The genetic diversity of sexes had evened out and we believe this will be for the long term. When selling the first offspring, we had decided that each shipment would consist of a minimum of three pair. This would assist in keeping their genetic diversity strong. We

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never shipped a single pair, as this would defeat the purpose. We actually informed every buyer which male would best go with which female.

The birds were all banded and sent to seven countries. These youngsters reproduced extraordinarily well overseas and by 1998 we saw these pairs starting to flood the foreign market. They had found their way into the commercial market overseas (not meaning commercial as the *pet* market) and they were being sold to breeders as single pairs instead of staying to the three to four pair formula.

The concept of the breeding consortium was that Dale Thompson, being the consortium director, would receive all the babies of all the Hoffmann's Conures. Then the babies could be matched up and sent out as new pairs.

The producing pairs always went to the other consortium members. They generally kept the same pairs but, occasionally, the following year, pairs would be switched.

By 1999 there was a total of over 350 babies that had been reared worldwide!

### Subspecies

In the books, there are two subspecies of Hoffmann's Conure. The nominate race is *Pyrrhura hoffmanni hoffmanni*. The other subspecies is *Pyrrhura hoffmanni gaudens*.

The alternative common name for this species is Sulfur-winged Conure, Parakeet or Parrot. Many Europeans use the term Sulfur-winged Parrot. Hoffmann's also used to be known as the Red-eared Conure, but that term is also used with another *Pyrrhura* and has been dropped for Hoffmann's.

The Hoffmann's Conure's main plumage is green with large, deep red patches over the ear-coverts on both sides of the head. Bright sulfur-yellow coloration is present on the upper side of the inner primary feathers and the outer secondaries. The underside of the flight feathers is a duller yellow color. Some yellow tipping is present in the green plumage of the head and the throat. The over all length of the Hoffmann's is approximately 24 cm (9.6 inches) and it weighs about 84

grams (2.94 to 3.12 ounces).


Differences are slight between the two recognized subspecies. The natural range of the Hoffmann's Conure is divided into two areas. The nominate subspecies, *P.b. hoffmanni*, originates from southern Costa Rica, while the subspecies *gaudens* originates from western Panama. Differences between the subspecies are slight, but easily detected upon close examination. The nominate differs by having less yellow marking over the head, and the green plumage over the lower part of the body is of a lighter shade.

The *P.b. gaudens* has a reddish tinge to the insides of all the feathers on the top and back of the head down to the nape. Of the birds from the original group that came in, some seemed to have a few flecks of red on the back of their heads but most were of the nominate race. When the wing of the *gaudens* is stretched out, you can see a beautiful yellow on the secondary feathers.

As we were reproducing this bird into the fifth year we had a number of birds that were showing intense color. This coloration was not only just in the red of their heads but in the dramatic intensity of having full yellow wings. They were remarkably different and we were then realizing that this was the *gaudens* subspecies surfacing.

Even though we were trying to keep it apart as much as possible, this subspecies was showing up. After about the sixth year we felt we had enough genetic diversity in our group that we could isolate and reproduce the *gaudens* subspecies by themselves. It was a very nice bird with good intensity of both reds and yellows and even some of the greenish-yellow on the wings. On some there was a full yellow slash on its wing. Really a beautiful subspecies, the *P.b. gaudens*!

### Conclusion

The Hoffmann's Conure, is reproducing very well in Europe with approximately 600 total located there, all derived from the original founder stock of 11 birds. At this time there is an effort to obtain a permit to import 20 Hoffmann's Conures to the United States from Panama. 

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