Some Endangered Parrots And The Role Aviculture Could Play In Their Survival

by Tony Silva, Curator
Loro Parque, Puerto de la Cruz
Tenerife, Canary Islands

The epitomy of endangered parrots is a blue and grey macaw referred to as *Ararinha do spixi* where it is native. Ornithologists call this bird *Cyanopsitta spixii* and aviculturists know it as Spix's Macaw, a species which has no close relatives and which is the only representative of its genus. It has always been rare and at present is known from a single wild bird, a remnant of a population that once comprised some 30 pairs. There are some 21 specimens in captivity, and these offfer the only hope for saving this species from extinction.

The decline of *Cyanopsitta spixii* is important, for it has occurred relatively quickly and aviculturists are mainly to blame. The species was first collected by Johannes Baptist von Spix, a German ornithologist who traveled throughout the north of Brazil for three years from 1817 on behalf of the Bavarian Museum. Near Jauzeiro, a town on the Sao Francisco River, his hunters obtained a specimen. This bird was used in describing in 1832 *Psittace spixii,* named after von Spix by J.G. Wagler. In the early 1900s, another German, O. Reiser, sighted the species near Parnaguá, Piauí. No other reports of the species were made until 1974 when Helmut Sick and Dante Martins Teixeira sighted five macaws believed to be this species in flight near Formosa do Rio Preto, northwestern Bahia. The next observer was Paul Roth, who in mid-1986 saw and photographed the last three birds, these occurring in the area of Curaca, a locality not distant from the Sao Francisco River where the type specimen was collected.

Several points highlight the history of this macaw. Almost all sightings have been made in the same locality; with one exception, the person making the observations have been German speaking ornithologists; and the decline has been the result of trapping, followed by habitat degradation, hunting and the introduction of the African honey bee, in that order. That trapping has been the most destructive force is highlighted by the fact that 15 months after Roth discovered the Curaça population, only one bird remained; the other two had been collected by a dealer living in Petrolina, in whose hands one died – the survivor is believed to have been sent out of Brazil.

All of the recent interest in *Cyanopsitta spixii* is due to a seizure made by Juan S. Villalba-Macías, a staunch conservationist and head of World Wildlife Fund's TRAFFIC office in Montevideo, Uruguay. On the morning of 23 March 1987, with a group of police, he stormed the house of Ernst Koopmann, one of the best known dealers in South America and a man who at that time had been trading in birds for over 30 years. The two nestlings he had were confiscated and returned to Brazil. The resulting publicity sparked the creation of a committee for the recovery of this species by the Brazilian government.

The future of *Cyanopsitta spixii* is

very insecure but breeding successes in the collection of Antonio de Dios of the Philippines and Josef Hämmerli in Switzerland, suggest that it may be possible to establish this species in captivity and ultimately reintroduce it to the wild. Many concessions have been made in order to try to save this species, the most important relating to the legality issue. The majority of the Spix's Macaws have been smuggled out of Brazil, but the government will consider them as legal, provided their holders agree to join the committee. This committee is made up of holders of this species, government officials, conservationists and ornithologists.

The sad case with the Spix's is that aviculture was almost solely responsible for its decline. For many years, everyone stated that the main threat to wild parrot populations was habitat loss; now we are realizing that this is true in many but not all cases. Like the Spix's, the Hyacinthine Macaw *Anodorhynchus hyacinthinus* has been affected by excessive trapping. If we look at the published reports of the ornithologists Reiser, Kampfer, Rehn, Stager and others that predate the 1960s, all state that the species was common. In the late 1970s, development in the heretofore inaccessible areas boomed and the species began to disappear. Simultaneously to this, trapping increased, the birds being sent out from Paraguay and later Bolivia; they were exported as endemics but the small

populations in these two countries could not support the level of harvesting. It slowly became apparent that the majority of birds were being smuggled out of the pantanal, the seasonally flooded part of southwestern Brazil. With tighter controls and the species up-listing to CITES Appendix I or endangered, which prevents trade except under very special circumstances, exports came under stricter control. However, another gap would soon open: the birds would be sent out illegally in small numbers directly from Brazil. Stricter enforcement of the law of 1967, which was passed by the Brazilian congress in order to stop all internal and external trade in endemic wildlife, has largely stopped this flow of birds overseas; but this has not meant that trade has ceased altogether, for now the internal Brazilian market would begin absorbing the birds collected. It is difficult to state with certainty, but several hundred Hyacinthine Macaws are probably sold each year by the illegal bird markets which operate throughout Brazil.

By the time Jorgen Thomsen, Carlos Yamashita and Charles Munn began their census in 1987 for the CITES Secretariat, the overall populations had been reduced to between 2500 and 5000 birds, with the closest figure probably being 3000 specimens. The majority occurred in Brazil, with a small number (perhaps 100 to 300) in Bolivia and probably only two in Paraguay. That the species has ebbed so considerably was not the only bad news that resulted from their field work; it also became apparent that populations had become fragmented and this prevented the interchange of genetic blood. In other words, over a time, inbreeding would become a problem.

While the Hyacinthine Macaw's long-term survival in the wild is in doubt unless all further trapping is stopped, its existence in aviaries is now more assured than ever. This species has begun breeding with regularity and it should be possible, with existing flocks, to have captive, self-sustaining populations, provided we in aviculture change some of the current practices. Every Hyacinthine breeder in the U.S. – this is not as common a problem in Europe – removes the eggs or young for hand-rearing. These highly intelligent and affectionate birds tend to become very imprinted. This is a problem if they are to serve as future breeders, given that many of the breeding behaviors are learned; hand-reared birds lack the benefit of acquiring such knowledge as mating display, communication and flock cohesion from their parents. To re-introduce the species would be impossible unless the young are parent-reared. We know from the case with the Thick-billed Parrots *Rhynchopsitta pachyrhyncha* released in Arizona, that hand-reared birds become disoriented; they lack even the simplest knowledge of flocking behavior. They then become easy targets for predators. You may be thinking that it is absurd to consider releasing a species back into the wild when the current population is being slowly trapped out of existence. And for thinking this you are right. But I am not suggesting that we return Hyacinthine Macaws to the wild now, but in the future, when the pressures which have brought the populations to a low point, have been ameliorated.

We in aviculture often justify our existence by claiming that we breed birds in order to save them from eventual extinction. This, unfortunately, is only partly true; we breed birds to keep them from disappearing but what we are breeding are cage-conditioned animals which would be unable to survive if returned to the wild. For many ornithologists and conservationists this is not doing the species true justice; they feel it is preferable to save the species in the wild first and in captivity second. It may be difficult for you to understand this point of view until you experience the thrill of watching parrots in the wild. They clearly show vitality, dexterity, intelligence, and a joy for living. Their sheer existence justifies the protection of the habitat; without parrots there is a lesser incentive to protect a forest community. Parrots are brightly colored, and this and the aforementioned reasons, can be used to convince authorities that this or that parcel of land be protected; they would be far less interested in conserving a small, drab and to them uninteresting finch. Consequently, parrots not only provide a key to protecting the environment but also to saving other species.

For birds to be re-introduced into the wild, there are certain considerations which must be kept in mind. The current trend in the U.S. – and I must point out that this is not the case in Europe – to hybridize macaws is shameful. The birds which are produced exhibit hybrid vigor, which makes them stronger; they could, with time, cause the disappearance of the true species. Impossible! you may exclaim. Then let me ask you this: when was the last time you saw a *pure-bred* Fischer's Lovebird *Agapornis fischeri*? The birds you keep may look like the wild type, but in ten to one of the cases, genetic tests will reveal them to be impure: they will have the blood of the Black-masked Lovebird *Agapornis personata* flowing through their veins. Just imagine the damage that would result if these ostensibly pure Fischer's Lovebirds were released back into the wild!

This trend of hybridizing reflects very poorly on aviculture. If you visit many parts of South America where the Scarlet, Blue and Gold and Green-winged Macaws occur, you will see them drink and visit mineral deposits along a river bank together; but you will never see them interbreed. Each species occupies a distinct niche, feeding on a different food and even breeding in a different type of cavity. The Scarlet Macaw, for example, will utilize a tree for nesting, while the Green-winged Macaw will often select a hole in a cliff face. If the species do not cross-breed naturally, why should we attempt to hybridize them in captivity? Many of you in favor of hybridizing will use arguments that they are beautiful, command higher prices and are in demand. To these weak statements I would reply the following: Can a Catalina, the result of a cross between a Scarlet and a Blue and Gold, be more beautiful than a pure bred Scarlet Macaw? The demand and price issue are created by aviculturists; if hybrids did not exist, there would be no demand and explaining to a buyer why such a bird should not be bought will almost invariably result in them understanding the situation. I have seen the offspring between the Catalina and a Blue and Gold which looked very much like the Blue and Gold but which genetically was very different. As with lovebirds, the relase of such a bird into the wild could create very major problems.

Hybridization should only occur, in my opinion, when there is but only one individual of a very rare species and no available mate; to breed it

with a closely-related species, in order to keep the "species" alive, would be justified. It would also be acceptable to hybridize in order to resolve problems of genetic deterioration. The small, existing wild population of Lear's Macaws *Anodorhynchus leari* is showing genetic degredation. Birds with deformed bills and tails have been seen. To save this species may require that specimens be crossed with Hyacinthine Macaws and then carefully bred to ensure that the Lear's Macaw traits predominate. Crossing would also be acceptable as part of a well thought out experiment.

Mutations can be as damaging as hybrids. These sports, which appear most often as blue or lutino specimens, may be very striking, and to establish them would undoubtedly make the breeder famous in certain circles and earn him considerable money. The problem is that some mutations are extremely dominant and their proliferation is at the cost of the wild type from which they originated. Look, for example, at the Cockatiel *Nymphicus hollandicus.* It is impossible to find a normal bird that breeds true – all have genes for mutations. This is a common species; but what would occur if the birds were rare or endangered? The establishment of a mutation then would clearly be detrimental to the survival of the species which truly needs conserving.

Aviculture has proven in the past two decades that to commercially breed parrots, many of which were formerly considered difficult, is possible. Breeders have reared young from 84% of the 314 parrot species; some of these have been produced to the second or subsequent generations. As an example, you may be surprised to learn that the Sun Conure *Aratinga s. solstitialis* is a relatively recent arrival in aviculture; it was almost unknown prior to the 1970s but is now so commonly reared and in such large numbers that no additional imports are needed to keep the species alive. The closely-related Golden-capped Conure *Aratinga s. auricapilla* appeared in large numbers during the late 1970s, the birds being smuggled out of Brazil and exported from Bolivia or Paraguay. It is as prolific as the Sun Conure, but in contrast to that species, the Golden-capped Conure is suffering from considerable habitat degradation and in many parts of its range it has become extinct. Here aviculturists have a possibility to contribute to its survival. The problem is that most breeders have failed to differentiate between the two subspecies – *auricapilla* has a red back while *aurifrons* does not. As a result, the birds we have in aviculture are of mixed subspecific composition. There is yet another problem which breeders should realize and attempt to improve. The majority of the breeders in the U.S., where the species is most common, are still producing from the original imports; their progeny are rarely kept back to form additional pairs but are sold on to the pet market. Once the original wild birds begin to die off from old age, we will see its captive population shrink dramatically. My feeling is that unless we act now, this species faces the possibility of dying out – and once it does there will be no chance of introducing it a second time.

Another species which was once traded in numbers and which is now gravely threatened is the Red-vented Cockatoo *Cacatua haematuropygia.* This native of the Philippines is threatened with extinction by habitat loss and Psittacine Beak and Feather Syndrome, a deadly virus accidentally introduced into the wild flocks; this occurred when a group of infected birds confiscated from a trader was released by Fauna authorities. Its long-term existence is also questionable in captivity, where it was never established. One reason is that breeders have found males to be particularly aggressive, killing their mates without warning. This problem can, however, be overcome: pairs can be housed in especially long flights and the primary feathers on one of the cock's wings can be trimmed, this to reduce his flight capabilities; the nest can have two entrances, so that should the male enter one hole in a fit of anger the hen can escape through the other. What breeders need to do now is to integrate every Red-vented in a breeding program. We have little chance of establishing this species, but must try hard or conservationists will justifiably point a finger and state: they allowed an ideal opportunity to slip through their hands.

Another cockatoo species which could benefit from an intensive breeding program is the Citron-crested *Cacatua sulphurea citrinocristata.* This very distinct subspecies of the Lesser Sulphur-crested Cockatoo *Cacatua sulphurea* occurs only on one island – Sumba in the lesser Sundas. Many parts of this island have been cleared of its native forests which the cockatoos need for nesting and feeding; it has been trapped for the trade; and viable populations are no longer believed to exist in the wild. There are many Citron-cresteds in aviculture. We must pool these birds and begin breeding them. This should not be difficult; my experience with this cockatoo is that given a nest and time, they will breed and will then continue doing so with notable regularity. The problem that I see is that breeders which rear this species sell them into the trade as pets. This will undoubtedly keep it from becoming established as new pairs, comprised of captive-bred birds, are not being formed.

The Moluccan or Salmon-crested Cockatoo *Cacatua moluccensis* is being reared with great frequency, particularly in the U.S. As with the Citron-crested, the young are sold for pets. The problem here is also that new pairs are not being established –

and obtaining adults from the wild where the populations have practically been decimated by excessive trapping, will no longer be possible. It is protected from trade by its listing on Appendix I (endangered). If we do not, in a short period of time, establish a sustaining captive population, which increases in the number of producing pairs from year to year, many in the conservationist community will justifiably look at the trade in this species as having been one of extreme waste, and which resulted in its extinction in the wild. I use the word extinction because the few surviving birds are insufficient for genetic interchange between populations and to add enough recruits to the flocks to compensate for natural losses.

I have pointed out several times that we must establish this or that species and must be ever-watchful that the young do not all go for pets. Many will use the argument that pet birds will, as they age and become aggressive, return to breeders. This is a weak argument. Look, for example, at the hundreds of Nicaraguan Green Conures *Aratinga holochlora strenua* imported into the U.S. during the 1960s and '70s. I know of not one pair in the hands of a breeder in the U.S., indeed, only in Guatemala and in Germany is the species being kept with the aim of breeding. What breeders must do is to keep back young and form new pairs; if any birds that were former pets are obtained, these should be considered a bonus.

It is not only the large species which are in trouble in the wild. The small Miritiba Pearly Conure *Pyrrhura perlata coerulescens* occurs in an area of Brazil where much of the forest has been cleared. Here is a species which has many desirable qualities, ranging from a free and reliable breeder to being attractively colored. A breeder wanting to make a contribution to aviculture could concentrate on establishing this species further. Another small parrot which must be mentioned is the Golden-crowned Conure *Aratinga aurea.* Until the present time this species continues to be traded, but this may not be for long. It has declined dramatically in the wild. Of hundreds of hours spent in the field, in areas where it is known to occur, I have seen it on very few occasions. These conures are relatively quiet, breed well and are inexpensive. No one has established a strain of aviary bred birds. Here is where one of you with limited space and good intentions could make a contribution that in a few years will be notable.

One group which is particularly keen to breed, extremely brightly colored and very lively are the lories and lorikeets. Their main fault is their liquid diet, which results in extremely fluid droppings. New developments in respect to diet have resulted in formulations that reduce considerably the liquid nature of their feces. The small species are particularly striking, yet with the exception of the Goldie's *Trichoglossus goldiae* none are established. To establish a species like the Fairy *Charmosyna pulchella* would be a tremendous contribution to aviculture.

For those with space, several members of the genus Amazona could benefit from your attention. These parrots, which are particularly popular as pets, have been traded in large numbers; in 1987 alone Argentina exported 31,599 specimens of the Yellow-winged Amazon *Amazona aestiva xanthopteryx.* This subspecies of the better known Blue-fronted Amazon *Amazona a. aestiva,* which it resembles but for the more variable head colors and the presence of yellow on the bend of the wing, has declined in some areas. It is not yet endangered but it is certainly a species which needs close monitoring. Truly endangered is the Finsch' or Lilac-crowned *Amazona finschi* and the Green-cheeked or Mexican Red-headed Amazons *Amazona viridigenalis,* both of which have much smaller ranges; they have also been the target of excessive trade, but in their case habitat destruction has been more widespread. Persons who live in Mexico and who have been acquainted with these birds in the field, report that each year their numbers decline. Two other Mexican species, the Double Yellow-headed Amazons *Amazona ochrocephala oratrix* and *A.o. magna*, have also been affected by trade and habitat loss, and could benefit from a coordinated breeding program.

Breeders working with this or any other species should not make the mistake of purchasing a single pair, but if truly serious must have a minimum of four pairs; these, once they begin nesting, will allow you to breed

for three generations without inbreeding. Much more preferable would be ten pairs. The very least one should have is three pairs. This is to ensure some genetic diversity, to allow you to continue your program even if some losses are experienced, and to give you enough birds to swap mates should incompatibility be encountered. This recommendation probably goes against the wishes of many breeders, who have single pairs of many species. Such a collection is pleasing to the eyes in that colors and species are variable; but it will contribute little in regards to information and conservation. We must realize that we are not Noah and our aviaries his arc: we should specialize, and in so doing learn as much as we can about a particular species. To me it is far more impressive to speak to an aviculturist who knows a considerable amount about a particular species, than one who knows a little about many. The specialist, by spending much time with the same species, will be able to notice behavior that could possibly have gone unnoticed and which could contribute much to our knowledge of that species. Breeders are encouraged to record their information in one of the many magazines which are published. Your information need not necessarily be typed; syntax also should not concern you. The important part is to record the information. Many editors would be delighted to receive your hand-written notes, which they could then edit. Some will even accept a cassette, which they will transcribe.

Aviculture has for many years been considered a hobby, which for some occasionally develops into a business. This has been fine until now. The future, however, is very bleak for many species. Trade in wild birds will no longer be permitted to occur and in those cases where it will, the numbers of birds traded will be very small. For many species, their existence in aviaries will be linked to the success of breeders: if they are reared in sufficient numbers, they will become established; if not enough are produced, then they will disappear. We must act now and take the necessary steps to become much more efficient, to become conservationist minded, and to become more scientific in our approach. If we do, future generations will look at aviculture as having offered an alternative to eternal extinction. ●