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The Blue-throated Macaw in the Wild: a Cause for Concern

by Alan J. Hesse

Ara glaucogularis Project Coordinator, Armonía

Globally restricted to an area in central Beni department, Bolivia, measuring hardly 15,000 square km. (9,300 sq. miles) and moreover bearing the unenviable status of a globally threatened species (Collar et al., 1992), the Blue-throated Macaw (*Ara glaucogularis*) calls for long overdue attention from the conservation world.

Until quite recently the only information available on *Ara glaucogularis* was mainly morphological data from five museum skins and from observations of the various captive individuals dotted around the globe. In terms of wild studies, however, *Ara glaucogularis* still remains one of the most mysterious birds in the world. Since the last reported sighting of the species in the wild over a century ago, various investigators reported dubious findings of the macaw as far south as southern Bolivia and northern Argentina and Paraguay (see in Ingels et al. 1981), although these were probably due to confusion with the superficially similar Blue and Yellow Macaw (*Ara ararauna*).

The Beginning

The first studies of *Ara glaucogularis* in the wild swiftly followed the sudden re-discovery of the species by Charles Munn of the Wildlife Conservation Society (WCS) in August 1992 (Jordan & Munn, 1993). With the help of his local guide, Munn immediately started a small scale experimental nest program in the then only known locality where the species had been found. The resident macaws were guarded, and encouraged to dig nest holes by starting the work for them. It is worth mentioning that tourists and bird watchers from all over the world eagerly contact us to visit this famous site anxious to see for themselves one

of the jewels of Bolivian avifauna.

The rediscovery of the long forgotten *Ara glaucogularis* coincided with the foundation of the Armonía Association, since 1994 the BirdLife International Partner Designate for Bolivia. One of the first challenges taken up by Armonía was to map for the first time the distribution of the Blue-throated Macaw (Hesse & Jammes, unpublished). With financial backing assured by WCS, the five month exploration and distribution study was effected using very simple means based mainly on habitat focused searches, and most importantly, local hearsay (although the latter upon several occasions proved to be an unreliable source of information). It quickly became evident that *Ara glaucogularis* appears to be dangerously low in density, and what is more, to be extremely patchily distributed within a relatively confined distribution.

These alarming observations together with the knowledge of the presence of marauding hunters for the illegal pet trade spurred us on to the next step of the *Ara glaucogularis* Project and, thanks to financial support provided by Loro Parque Fundacion as well as some extra backing from Charles Munn, the census of the species' wild population has been underway since spring 1995. There is still some fieldwork to be completed for us to arrive at a total count, but enough ground has been covered to allow us to estimate that barely 100 individuals make up the current population of Blue-throated Macaws in the wild. If this figure is anywhere near correct, we are indeed justified in our fears for the species survival and it is imperative that appropriate measures be taken

rapidly.

As important as purely scientific study is, contact with local human inhabitants is just as important, if not more so. It is an undeniable fact that those people who live in the vicinity of the Blue-throated Macaw will hold the future of this species in their hands—for better or for worse. The problem in most cases is that very few of the local inhabitants are aware of this intrinsic responsibility. Be it from confusion with the all too similar Blue and Yellow Macaw, or simply from a lack of interest, the great majority of those people who co-exist with the Blue-throated Macaw are blissfully unaware of this species' existence. Those few who do recognize the macaw generally remain unconcerned by its worrying scarcity in the savannas of the Beni.

This is a situation for which these people can hardly be reproached. What conservationists can do, however, is set about their task in the most intelligent way possible and this involves a lot of positive contact with both the humbler people of Beni and the powerful landowners on whose property the species occurs.

The Blue-throated Macaw shows all the symptoms of an animal which Man is once again irrevocably, although sometimes not always consciously, pushing towards the brink of extinction. To reverse this process the human co-habitants need first of all to know this species exists, and secondly, they need to acquire the will to prevent its disappearance from their landscape. The slow processes of awareness and attitude change have been applied to fight the extinction of many species across the world. In many cases the result obtained is merely a facade or, at best, a shift in fashionable thinking. But in equally many other situations true conservation action has come forth. The key to winning the understanding, trust and long-term cooperation of any human beings is to approach them at their own level. Education, which in this case is environmental in nature, is a tried and tested means to accomplish this.

Fundamental to the philosophy of Armonía, environmental education is a component of singular importance in the work on *Ara glaucogularis*. It is

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false to think that expensive and sophisticated means are a requisite to act effectively in this field. We started on the 1993 distribution study to simply talk with local people living near the macaws. During the census we continued this simple but important contact, sometimes donating much appreciated food supplies and, where appropriate, distributing rudimentary but popular didactic materials (i.e. black and white drawings of *Ara glaucogularis* along with coloring pencils, copies of the Armonía magazine, etc.) to community teachers and children, who are the main focus of our attentions, especially since they often exert an indirect but powerful influence on the adults.

Apart from a few rare cases where certain suspicions of our true purpose lingered, the positive contact established with the people approached has achieved considerable results in certain areas. In one community there can be said to exist a certain new-found sense of identification with the Blue-throated Macaw.

The Following

Data from the distribution and census of *Ara glaucogularis* tells us where these remarkably elusive macaws can be found and roughly how many there are. This information is very important if conservationists are to act further in the interests of the species, and thus these studies, which actually form a continuous appraisal of population status, are a beginning, rather than an end in itself. With each day spent observing the Blue-throated Macaws or chatting with their human neighbors, new avenues unfold revealing strategies enabling us to broaden the scarce existing knowledge of this species, and especially to act further in the interest of its continued survival in the wild. We have seen from our efforts to date that one of these strategies is unquestionably an enhanced program of environmental education and general human contact. Another equally necessary direction is, of course, scientific study *per se*.

In this aspect, there is no shortage of questions to be asked and answered. An area of study which is of high priority for the conservation of



People of the Beni Region, Bolivia greet the Blue-throated Macaw survey plane.



Photo by Erika Cuellar

Burning of the "palm islands" destroys the habitat of the Blue-throated Macaw.

the species is that pertaining to the habitat of *Ara glaucogularis*. Originally described as a combination between seasonally inundated savanna, forest islands and valley riverine forest (see Ingels et al., 1981), habitat observa-

tions to date would suggest the inclusion of the latter category to be erroneous, and very likely a result of the traditional confusion with *Ara ararauna*, which certainly does inhabit forest as well as open land.

Until the habitat study planned for 1996 yields some more detailed information, the limited observational data gathered so far suggests that *Ara glaucogularis* inhabits more open terrain comprising savanna forest islands (100 - 300 m elevation) although it does often frequent diminutive tracts of isolated low growth secondary forest, sometimes containing crops. If the macaw has any habitat preferences, it would seem that these are for the ecotone which separates island edge from open savanna.

With regard to feeding habits, the species feeds extensively on the fruit of the locally called "Motacú" Palm (*Scheelea princeps*). This widely distributed species, as well as other palms (i.e. *Acrocromia totai*) and some tall deciduous trees (*Ebenaceae*, *Moraceae*...) are associated with *Ara glaucogularis* and other sympatric macaws (*Ara arauna*, *A. chloroptera*, *A. severa*, *A. auricollis*) for both feeding and nesting purposes. It is noteworthy that the habitat described above also supports considerable biodiversity, not only the abundant avifauna, but also many mammal species such as Howler Monkeys (*Alouatta caraya*), Anteaters (*Tamandua tetradactyla*, *Myrmecophaga tridactyla*), Coatis (*Nasua nasua*), and even the Marsh Deer (*Odocoileus dichotomus*).

The habitat frequented by *Ara glaucogularis* in the majority of cases happens to be on private land owned by affluent cattle ranchers. Savanna makes ideal pasture land and every year seasonal burning takes place on a very large scale. Bolivia reached the international press in 1995 for its uncontrolled burning. The impact on the fauna is very difficult to assess but many people in Beni suffered direct health consequences. To this damaging practice, which at least is restricted to but a few months a year, must be added general land clearance, also in the interest of cattle ranching. Fortunately this has not reached anywhere near the scale observed in other parts of Bolivia and neighboring countries that are more agriculturally developed. As far as *Ara glaucogularis* is concerned, the main risk involves the macaws finding themselves without enough hollow palm trunks, their ideal nest site, which are often cut down on

a localized subsistence basis for fuel.

The loss of potential nest sites results in enhanced inter- and intra-specific competition. It has often been observed that the smaller and lighter *Ara glaucogularis* comes off worse in encounters with bigger and stronger congeners such as the Blue and Yellow and the Red and Green Macaws (Boussekey et al, 1992; pers. obs.).

The habitat destruction provoked by the cattle itself is immense and forest islands once impenetrable with lush vegetation are rapidly and ruthlessly transformed into dry and lifeless dust bowls. The effect of cattle ranching on forest island fauna and flora is therefore devastating but there is as yet no evidence to suggest that there is any direct impact on macaws, which have been seen to frequent cattle-destroyed islands. This may be simply because *Ara glaucogularis*, like all members of its genus, feeds primarily on palm fruits, and the palms forming the main tree population of the islands found in the Benian savanna are sim-

ply not affected as rapidly by cattle as are the more vulnerable undergrowth plants.

An obvious course of action to remedy habitat disturbance is to work with the landowners, who are in any case always contacted before initiating a visit to their lands. The privilege of owning the only lands in the world on which occur a species of macaw as rare as *Ara glaucogularis* is a concept entirely new to the property owners. However, once this information has sunk in and positive relations are established, it is a comparatively simple step to convince them of the importance of the species as well as that of its habitat. And from this point can be suggested a series of practical recommendations aiming to ensure the cooperation of the landowners and their employees in avoiding destruction of *Ara glaucogularis* habitat. Such recommendations are of the sort that can be put into immediate practice without any extra costs and not much extra effort. For example, in sites known to support macaws, effective

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action involves refraining from cutting down or burning potential nest sites (dry palms especially), and to generally avoid damage to forest islands where macaws are known to roost and feed.

Simple, concrete actions on a localized basis have the advantage of

enhanced flexibility, at the same time enabling local people and landowners to participate in our work and gradually learn to become the true guardians of "their" Blue-throated Macaw. Some of the above described measures are already being observed in more than one locality supporting a significant

proportion of the *Ara glaucogularis* population.

Undoubtedly the most difficult challenge in the long-term conservation of the Blue-throated Macaw is to curb and, if possible, stop the illegal traffic of this species in the international pet trade. Very little can be said on this subject other than it is a very alarming and persistent menace. On a localized scale, it is our intention to once more use close links with local people and sympathetic landowners to set up a sort of "vigilante network" whereby our collaborators would generally keep a watchful eye on their resident macaws and inform us (personally when possible, or by radio) of any suspicious occurrences. Landowners could effectively make the tasks of hunters and traffickers a lot harder by checking access to private lands and controlling trespassers, measures very rarely taken up to the present date in the vast ranching properties of the Beni.

On a more political level, it would be ideal to count upon the active participation and support of a recognized intervention authority, such as TRAF-FIC International, as well as that of the appropriate government agency.

The Future

The message is crystal clear: in Bolivia exists one of the rarest birds in the world—an enigmatic species belonging to the highly charismatic and ancient parrot family. In the interests of conservation, ethics, biodiversity, and in a certain way, humanity itself, and with the help of individuals and institutions both within and outside of Bolivia, Armonía is carrying out the first studies of the *Ara glaucogularis* population still surviving in the wild.

The courses of action to be taken to ensure the survival of this species on Earth form an entity; conservation strategies are not to be seen as mutually independent of each other. On the contrary, all possible angles must be interactively explored in order to increase our chances in the fight to reverse the process of gradual annihilation provoked by the advance of Mankind.

A single conservation organization



School children of the Beni Region of Bolivia with their paintings of the Blue-throated Macaw.



Painting of the Blue-throated Macaw by a school child of the Beni Region, Bolivia.

Photos by Alan Hesse.

cannot take on global habitat destruction and extinction of the world's species, but we in Bolivia can still save the Blue-throated Macaw from permanently disappearing from the savannas of Beni.

Why should we do this? The "Blue-bearded Macaw" as it is known in its homeland, is native to a confined area miraculously supporting the last known wild population on Earth, comprising barely 100 individuals; the species is a unique source of genetic diversity in a country supporting over 1360 species of birds; it certainly plays a role in the ecological balance of its chosen habitat, itself threatened by human activities; and last, although certainly not least, the Blue-throated Macaw is a beautiful animal with every right to exist, and which, moreover, shows all the signs of having a complex social organization and being, perhaps, one of the most gifted species of its characteristically intelligent family.

In short, we want *Ara glaucogularis* to live unmolested in its natural environment for as long as possible. To take up this challenge it is necessary to carry on studying the species in order to understand its relationship with its fragile habitat. It is vital to reach the local people to gain their understanding and, if they are so disposed, their valuable cooperation. Only then will conservationists be able to prevent the irreversible loss of *Ara glaucogularis*.

Bibliography

- Collar N.J., Gonzaga L.P., Krabbe N., Madrono Nieto A., Naranjo L.G., Parker III T.A., Wege D.C., (1992) Threatened Birds of the Americas. The ICBP/IUCN Red Data Book, 3rd Ed., Part 2. ICBP, Cambridge, U.K.
- Boussekey M., Morvan O., Sant-Pie J., (1992) Preliminary observation of the Blue-throated Macaw (*Ara glaucogularis*) North of Trinidad, Bolivia. (Unpublished).
- Hesse A.J., Jammes L., (1993) A preliminary assessment of the distribution of the Blue-throated Macaw (*Ara glaucogularis*), Beni, Bolivia. (Unpublished).
- Ingels J., Parkes K.C., Farrand Jr. J., (1981) The status of the macaw generally but incorrectly called *Ara caninde* (Wagler). *Le Gerfaut*. 71:283-294.
- Jordan O.C., & Munn C.A., (1993) First observations of the Blue-fronted Macaw in Bolivia. *Wilson Bull.* 105(4): 694-695.
- Rojas P.F., Catálogo de plantas. U.M.S.A. Agronomía, La Paz Bolivia. 1990. ➔



Armonía's 1995 status and distribution surveys were financed by the Loro Parque Fundación, which again in 1996 has been able to direct US\$25,000 to the further work essential to prevent the extinction of this critically endangered species. At least US\$40,000 more is needed over the next year, and the Loro Parque Fundación makes an urgent appeal for donations to assist Armonía to save the Blue-throated Macaw. The Loro Parque Fundación also coordinates the European Species Survival Plan for this species in captivity.

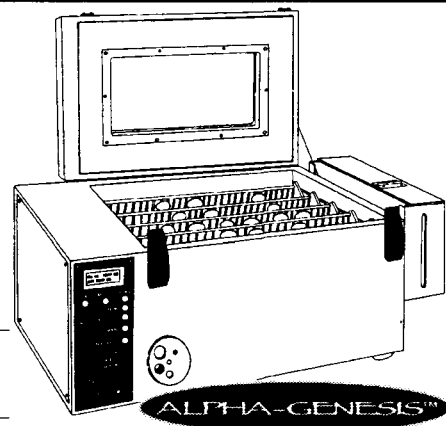
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