

Successful Breeding of the Red-browed Amazon (*Amazona rhodocorytha*)

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The Red-browed Amazon does not readily breed in captivity, and to date few breeders can report breeding success. However, Loro Parque Fundación (LPF) has developed some techniques that seem to result in a significant number of successful breeding attempts, and we are continuing our experiments to refine our breeding techniques with this highly endangered species.

At LPF the species was first kept in the conventional manner in isolated single pairs. However, because over the years no breeding occurred, some new procedures were introduced. Initially we tried a method where a group of six pairs were placed together in a group aviary, 15 meters long, 4 m wide and 3.5 – 4 m high (for those of you not familiar with the length of a meter, it is a bit over 3 feet). Small separation cages (at least 6 cages) were attached to the group aviary, with the top mesh of each separation cage being at the same height as the top mesh of the group aviary. Each separation cage was approximately 1.5 m long, 1 m wide, and 1 m high, containing perches, an opening allowing access to the group aviary, and having a nest-box at the far end. The opening into the group aviary could be closed with a mesh partition.

As a result of living in this flock situation, several pairs came into breeding condition. Each pair established itself in a separation cage and laid eggs in the nest-box. The eggs were removed for artificial incubation and the chicks hand-reared. The first year ten young were produced. No changes were made in the setup, but breeding success in the subsequent year was only five young. In the following three years – with nothing changed -- no breeding occurred. In 2001 the group was shifted into another large aviary. In that year there was only one clutch of two eggs, which were artificially incubated and the two young hand-raised.

In 2002, again the species did not breed. Thus we decided at the end of 2002 to separate the entire group, and all other pairs in the collection, and maintain the birds individually for a period of approximately three months, without contact with their conspecifics. Each bird was maintained in a cage suspended 1.25 m off the ground and measuring 3 m x 1.5 m x 1.5 m high. The twenty two reproductively mature Red-browed Amazons were distributed in suspended aviaries throughout the entire breeding center.

Following about 3 months of isolation from each other, the birds were brought together at the end of February 2003 into three different groups. Six pairs were placed into a flight measuring 20 m x 12 m x 3.5 m



Amazona rhodocorytha. Photo by Loro Parque Fundación

high. Three pairs were placed in a second flight 10 m x 10 m x 4 m high. As controls, two pairs were each placed into individual suspended cages 5 m x 1.5 m x 1.5 m high. The individuals in the suspended cages kept themselves apart and did not produce eggs. But four pairs laid eggs in the six-pair flight and two pairs laid eggs in the three-pair flight. Again the eggs were taken for artificial incubation and hand-rearing, and altogether ten young birds resulted. However, we noted that there was also a large number of infertile eggs.



Amazona rhodocorytha. Photo by Loro Parque Fundación

In November 2003 all birds were separated again for a three-month period, including the birds of the

successful breeding pairs. In February 2004 they were brought together. Into the aviary with three pairs, a fourth pair was added, and the group with the six pairs remained constant apart from the exchange of a female. The control of keeping individual pairs was no longer tried. Again about two thirds of the pairs came into breeding condition, and the year 2004 produced seven chicks, but again with a large number of infertile eggs. A pair in the group of four pairs was permitted for the first time to incubate the eggs itself, and two chicks were raised without problems. These chicks integrated themselves into the group, without any aggression being directed towards them by other birds when they first flew from the nest-box.

In November 2004 the birds were separated again and brought together in February 2005. This became the record year in our breeding of the Red-browed

Amazon. Again in both groups numerous eggs were laid and altogether 14 chicks were raised with artificial incubation and hand-rearing. A further attempt to allow parent-raising within the group failed; however, aggression by the other birds was not the cause of failure. In the group with the four pairs, a pair had to be removed because it was opposite the other large aviary and there was too much aggression. It appears that careful attention must be paid constantly to the level of aggression among the birds in an aviary and an intervention must take place if persistent aggression is observed. All the birds must be placed into the group aviary at exactly the same time so that no individual has a home advantage. Numerous feeding sites must be provided so that each bird can eat without interference from the dominant birds.

We speculate that the separation of the birds during a period of some weeks increases the demand for social contact with conspecifics and can stimulate pair bonding and the breeding of individuals that have never bred before. However, the reintroduction of the birds together into flights must be done carefully. Upon their coming together, these otherwise rather slow-acting Amazons become very active. There is much vocalization, the birds actively explore the aviary, and the aviary occupants must be carefully observed over many hours in order to intervene in the case of excessively aggressive interactions. Based on several years of experience, it seems that this method results in successful laying of eggs, although a number of the eggs are infertile.

It needs to be emphasised that bringing well-bonded, existing pairs into a group can result in these dominant pairs behaving very aggressively towards the other inhabitants. This is why the group method works best when all birds are separated from one another for a few months. The members of well-bonded pairs find each other again very fast. Once together, they busy themselves with each other and leave the other inhabitants in peace. The LPF is continuing with this system and will continue to experiment in order to increase the number of pairs in a group that are able to raise their own young. ■



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