APPENDIX 1 PROFILES

No. 1 The Hyacinthine Macaw
(Anodorhynchus hyacinthinus)

by Rosemary Low

If one species, above all others, could be said to symbolise the need for The World Parrot Trust, it must surely be the Hyacinthine Macaw. The largest in length (not weight) of all parrots, and arguably the most magnificent, it has fared very badly at the hand of man. Always in demand by native people for food and for feathers for ornamentation, these were minor threats to its existence which it was able to tolerate. As far as we know, they made little impact on its existence for thousands of years.

But the additional threats it has faced during the past two or three decades have reduced its numbers and its range to the point where it is declining at an alarming rate and is now seriously endangered. It is hardly necessary to enumerate the factors responsible – the same old story of excessive trade and habitat destruction or disturbance. However, in the case of this spectacular macaw, and unlike that of nearly all other endangered parrots, excessive trade is the major factor in its decline.

The wastage of life involved in large-scale trade in live birds is very sad – but it is especially so in the case of this macaw. It is unique. It is special. Even those who know it well find it difficult to put into words what it is about the Hyacinthine that is different. Its nature is so different to an *Ara* macaw. Docile. Unwary in the wild. A Scarlet Macaw, for example, is difficult to trap, suspicious and extremely intelligent. It is almost as though, in contrast, the Hyacinthine evolved in a world without predators. Like the Dodo, it knew no fear and no suspicion and this has almost led to it being trapped into oblivion. As Jorgen Thompsen wrote in a recent article (*Watchbird*, December/January 1990, When Prohibition isn't enough): it could be "A macaw designed by bird trappers" ...

Today, everyone interested in aviculture has seen a Hyacinthine or knows someone who has one. This was not the case 30 years ago. The species was extremely rare in captivity, represented in collections of the mainstream zoos such as London and almost non-existent in private collections. Alas, this macaw is well-known, although expensive today, not because breeders are highly successful, but because at least 90% of captive birds are wild-caught. There are some highly successful breeders, especially in the United States. In the UK Harry Sissen has bred 11 in the past two years alone. The problem is the same as that described so graphically by Peter Bennett and David Woolcock in the last issue of **PsittaScene** in respect of Scarlet Macaws: only a small percentage of wild-caught birds breed successfully. They survive in non breeding situations or do not live long enough to breed, they are paired incorrectly – perhaps with their own sex, or incompatibility is a problem. Whatever the reason, only a small percentage of wild caught birds will pass on their genes to found another generation.

Genes are more precious than jewels. Once lost they can never be recreated. Everyone who owns a parrot of a species which is threatened has a responsibility to breed from it. There can be no other justification for ownership. It is a living creature. It must not be coveted for its beauty alone. But it MUST be given the opportunity to breed.

Before discussing breeding the Hyacinthine, let me quote again from Jorgen Thomsen's most informative article:

"In all likelihood, Hyacinth Macaws originally ranged from just south of the Amazon in Para to the drainage of the Parana and Paraguai Rivers in Paraguay and southern Brazil. Despite the futility of estimating the species' total population size prior to human interference, available information indicates that it may well have numbered several hundred thousand individuals. In the early part of this century, explorers reported flocks of hundreds of Hyacinths at localities in Piaui in northeastern Brazil. Today there are no Hyacinths in this region."

It is believed that this macaw once lived in many parts of Goias, Maranhao and Mato Grosso. Today few or none survive. Almost certainly due to trapping, the three viable populations are now so isolated from one another that each must be managed as a separate biological unit.

The foregoing should make it very clear why captive breeding of the Hyacinthine Macaw should have high priority among aviculturists. If the wild populations are to survive there must be no more trapping. This is, of course, illegal. The Hyacinthine was placed on Appendix 1 of CITES in 1987. Unfortunately, this seemed to have the effect of increasing trade, a trade which decimated entire large populations in some areas. Thousands have been exported during the past two decades, a fact which must rest heavily on the conscience of all responsible aviculturists. WE owe the species a tremendous debt; by breeding it and placing the young with responsible breeders – **not selling the young as pets** – we can partly repay this debt.

There is not space here to discuss the basics of macaw keeping and accommodation, only to provide information which relates only to this species. Unfortunately, most breeders incubate the eggs artificially or remove the young for hand-rearing when a few days old, to increase production and to produce tame young for pets. I will not comment on this practice here, except to say that the result is that very little is known about parent-rearing in captivity. We do know, however, that more often than not, only one chick hatches. If two hatch, the smallest is likely to be neglected and will not survive unless removed for hand-rearing. There are very, very few instances of two chicks being reared to independence by the parents in captivity.

In the Breeding Centre at Palmitos Park last year, our pair hatched their first chicks. They had laid on several occasions before I became curator. The female produced two infertile eggs at the beginning of June 1989. These were removed two weeks later. Shortly afterwards routine testing revealed that the pair was positive for psittacosis. (This is nothing unusual; probably the majority of captive parrots carry psittacosis, or chlamydiosis as it is now more correctly called, but they shed it only intermittently.) The pair had three weekly injections of Vibravenös.

The female laid two more eggs, almost certainly on July 26 and 29. After a couple of weeks these eggs appeared rather soiled; they were therefore placed in an incubator and chickens' eggs were substituted in the nest. In both cases the first pip mark was made 48 hours before hatching but there was no further progress for about 40 hours. When it was obvious that hatching was imminent, the egg was replaced in the nest and a chicken's egg removed.

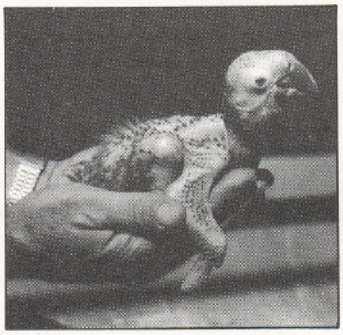
Nest-boxes in all aviaries in the breeding centre can be inspected easily from the service passage of the next block of aviaries. I therefore decided to leave the young in the nest and weigh them daily.

They would be removed for hand-rearing only if absolutely necessary. It was planned to retain the young for breeding purposes; because hand-reared birds easily become imprinted on the rearer (although unless totally

BREEDING BIOLOGY

Age at sexual maturity:
four to six years
Clutch size:
normally two, rarely three, one recorded instance of four
Incubation period:
usually 28 or 29 days
Weight of newly hatched chicks: about 25g

Length of time in nest:
about 100 days
Weaning weight:
1,100 to 1,200g
Appearance of young:
differ from adults only in shorter tail and whitish not yellow stripe on the tongue.



The eldest chick, aged 21 days. Four days later, the parents had removed all the grey (second) down.

The youngest at 31 days, the day after her removal from the nest.

Photos: Rosemary Low

mismanaged this does not mean they are of no use for breeding) I cherished the dream of two young sitting on the perches with their parents. Also, in truth, I knew that if I hand-reared them it would be impossible for me not to form a very close relationship with them – which would not be wholly desirable!

The chicks were weighed every morning about 9am, and the weights were recorded in grams:

The chicks were well fed and their weight gains seemed excellent. The parents were eating fresh corn on the cob, also sprouted sunflower seed, in preference to other foods, also tomatoes, walnuts and oranges. When the youngest chick was only eight days old, I noted that its crop was full of hard seed. When the chicks were 16 and 13 days the edges of their lower mandibles seemed soft and jagged so I started to give a liquid calcium preparation into the mouth: Necthar-Cal (Labatorio-Level) suspension. Between 20 and 40 ius were given on six occasions during the next two weeks. They took this readily from a small syringe.

At first the parents had been tolerant of the handling of their young for weighing purposes. As the days went by they became extremely impatient to enter the nest during this procedure, which took only a few seconds. When the eldest chick was 30 days old, the parents started to pick at the feathers erupting on the crown – a possible sign of stress. When the youngest chick was 30 days old it suffered a serious bite on the bend of the wing. Unable to direct their increasing aggression at us, the parents had bitten the unfortunate chick.

Both young were therefore removed immediately for hand-rearing. On that day they were ringed with 18mm (internal dimension) aluminium rings which are 8mm wide and – this is the important dimension – 3mm thick. This is the minimum thickness which can be used for this species in aluminium. Alternatively one can use 16mm narrow stainless steel rings (very narrow).

The young Hyacinthines were reared on a mixture containing one quarter fruit (usually banana, but papaya during the early part of the rearing period) and three quarters cereal. The latter consisted of approximately half wheat germ cereal (25% protein) and half Nolgalda baby cereal (a Spanish brand, approximately 13% protein, containing some milk).

By the age of 11 weeks they were nibbling at slices of wholegrain bread and at spray millet, and were licking at orange. It was not long before they were eating orange, pieces of fresh corn and walnut halves. At this stage they were still being fed four times daily and taking about 90g to 100 g at each feed. I am a great believer in the weaning procedure being as gradual as possible and never try to force it. This may mean that I feed my chicks a little longer than most people – but the Hyacinthines were such a pleasure to rear! I used a large spoon with sides bent inwards as unless dozens of chicks are being reared and time is at a premium, I can see no advantage in syringe-feeding (but several disadvantages).

They were weaned just before they were six months old. Their favourite foods, in order of preference, were whole walnuts and pecans (no other nuts were fed) which were limited to about seven or eight per day, banana, fresh corn, whole grain bread and dry dog chow; they also ate orange, Swiss chard, cabbage, carrot, apple and a little boiled maize. The female has never shown any interest in sunflower seed and the male consumes very little. He also eats a little boiled maize.

I refer to them as "he" and "she" in spite of the fact that they have not been sexed. There are subtle behavioural differences in macaws which the experienced hand-rearer can pick up when the young are a few weeks old, usually well before three months. The male was quite rough in his behaviour towards the female, so that they were given separate cages before they were four months old. Soon after they were placed in a large outdoor aviary during the day with young Blue and Yellow Macaws and an adult female Hyacinthine. The latter would preen the young male but totally ignored the young female.

Weight gains of two parent-fed Hyacinthine Macaw chicks

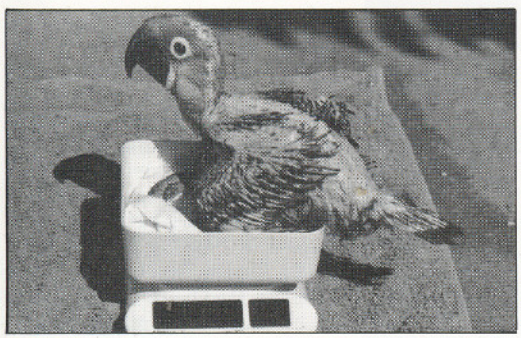
Age in days	Weight No. 1 in grams at 8am	Weight No. 2
Day hatched	–	25
1	26 (est. 3g of food in crop)	28 (full)
2	34 (4g food)	32 (full)
3	38 (empty)	40 (2/3 full)
4	46 (full)	52 (full)
5	51 (full)	59 (2/3 full)
6	66 (full)	72 (full)
7	80 (full, harder food)	88 (full)
8	88 (full)	104
9	106 (full)	120
10	122 (full)	130 (nearly empty)
11	132 (half full)	162 (half full)
12	154	182 (half full)
13	166 (empty)	198 (half full)
14	186 (half full)	230 (half full)
15	222 (half full)	250 (empty)
16	248 (full)	280 (half full)
17	270	302 (half full)
18	282 (empty)	330 (1/3 full)
19	320 (half full)	358
20	336 (half full)	396 (half full)
21	378 (half full)	412
22	400	432
23	434 (half full)	466
24	446	480 (nearly empty)
25	470	520
26	496	514 (empty)
27	522	582
28	546	586
29	570 (empty)	598
30	600 (nearly empty)	550 (empty)
31	604	
32	622	

Back in the hand-rearing room the young Hyacinthines would have half of an hour of freedom early every morning along with a couple of young Blue and Yellow Macaws – but the male was not to be trusted with them, so he was often returned to his cage when he started to bully them. The female never did this.

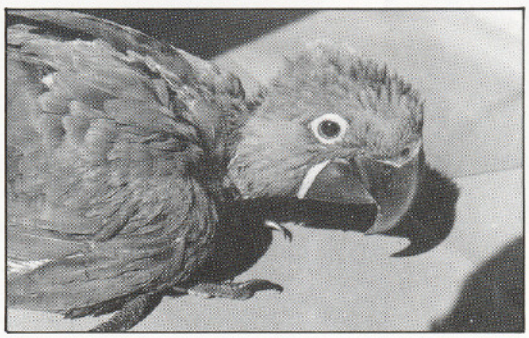
Except for one week while I was in the UK (for the launch of the World Parrot Trust), I was solely responsible for their care and feeding. They were extremely affectionate and responsive towards me and after the age of about four and a half months, would not permit anyone else to touch them. Like all young macaws, they loved to have their heads scratched and the female in particular was not averse to launching herself upside down in my arms during such pleasurable interludes. When tame, Hyacinthines with their enormous liquid eyes and doleful expressions, are irresistible creatures. It is no wonder people wish to make pets of them ...

Unfortunately, most potential buyers are either unaware of the fact or simply cannot comprehend it, that a tame Hyacinthine demands as much affection and attention as a child. If it does not receive it depression will result, leading perhaps to feather plucking or mutilation.

I can offer only one word of advice to anyone considering the purchase of this majestic macaw as a pet: DON'T. If you have sufficient resources and space, buy two unrelated young ones. Hopefully, you will after five or six years, become a producer of Hyacinthines. The owner of a single pet bird of an endangered species is the worst kind of consumer ... Do **not** join their ranks.



The eldest, weighing in, aged 43 days.



The youngest at 72 days, just after being moved to an all-wire cage.

The youngest aged 116 days enjoying the freedom of a large aviary during the day.