BREEDING JOSEPHINE'S LORIKEET
AT PALMITOS PARK

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The rich avifauna of New Guinea includes numerous brightly coloured small parrots. In contrast, those from the tropics of South America, beautiful as they are, appear almost dull. One of the most beautiful is surely Josephine's Lorikeet Charmosyna josefinae. Briefly, it can be described as a smaller, shorter-tailed version of Stella's Lorikeet, which is represented in aviculture by C. papou goliathina. Josephine's differs from Stella's in having the upper side of the tail red; in Stella's it is green. Josephine's has several notable assets from the avicultural viewpoint, especially its beauty, tameness and appealing personality. Adults are sexually dimorphic, have a fascinating courtship display, nest fairly readily and mature early.

Josephine's is a small lory, with a body length of about 12 cm and a total length, when adult, of about 24 cm. It has a graceful shape as well as a beautiful colour scheme. Three sub-species are recognised. I believe that sepikiana is the best know in aviculture. In this race the area of blackish-green on the abdomen is larger and the front of the black patch on the crown is streaked with grey or bluish-grey. The streaking is said to be bluer in the nominate race and absent or nearly so in cyclopum. The nominate race is said to have the lower back red in the male and green in the female (Forshaw, 1973). In the other two sub-species the female has the lower back and sides of the flanks brilliant daffodil yellow.

In late 1988, while curator at Loro Parque, Tenerife, I obtained three male Josephine's which had been bred there from one pair during the previous thirteen months. I had no idea where I would be able to obtain females as they are hard to acquire. This was the first new species I had added to my own collection for three years. There was little need for at that time I was working with over 200 species of parrots! Early the following year I moved to Gran Canaria to look after the birds in the Breeding Centre of Palmitos Park. A few months later the park's founder and owner, Mr. K. Paulmann, imported three female and one male Josephine's from Germany. Unfortunately, two of the females were not in good health and one of these died. The third, however, paired with one
of the captive-bred males, has formed a successful breeding pair.

The lories are housed in an enclosed building to protect them from the strong sun and winds of the mountain location. A section of the roof above each row of cages is covered with green shade cloth, thus giving the whole building an airy, sunny, outdoor feel. Each pair of lories is housed in a suspended cage measuring 2 m long, 76 cm wide and 1 m high (6 ft. 6 in x 2 ft. 6 in x 3 ft. 3 in).

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Two young male Josephine's Lories.
Display and copulation

The behaviour of this species is very interesting to observe. When excited they flick the head very quickly, sometimes also waving the long tongue outside the beak. Without moving the feet, they jerk the body from side to side, keeping the head low, almost in line with the body. The display is as obvious in the female as in the male. Mating is preceded by head bobbing in both sexes and, as in all lories, is performed by the male with both feet on the female's back.

Incubation

In February of the following year, 1990, the pair consisting of 1988 hatched male and the wild-caught female, nested. The female laid on 4th and 6th or 7th February. In this species, and other members of the genus, incubation is carried out by male and female. Anton Spenkelink found that of his pairs the male incubates for the first five to seven days, then male and female share incubation, then after two weeks the female incubates. I shall keep notes in future to see if a similar pattern emerges in our pairs, although often both birds are in the nest together.

Eggs are usually laid at intervals of three days, sometimes two days. The clutch always consists of two eggs. New laid eggs are, of course, white like all parrot eggs, but after a few days the shell acquires a few grey lines, something I have noticed only in the closely related Stella's C. papou goliathina and Fairy C. pulchella pulchella species. In Charmosyna loriheets incubation does not commence with the first egg and usually not with the second egg - a strange facet of behaviour. However, this pair of Josephine's starts to incubate before the second egg is laid because the young hatch on consecutive days, whether the eggs are laid two days or three days apart. This probably means that incubation commences the day before the second egg is laid. So far one other pair (both captive-hatched) has bred, producing two young, which also hatched on consecutive days. In the instances where two chicks hatched (both pairs), they hatched on the following number of days after the eggs were laid: 27 and 25 or 26, 26 and 25, 27 and 25, 28 and 26 and (captive-bred pair), 29 and 27. Thus the true incubation period (calculated on the second egg) has varied from 25 to 27 days. Four of these eggs were measured, two from each of two females. Those of the original wild-caught bird measured 19.5 x 22.5 mm and 18.8 x 22.5 mm, and those of the other wild-caught female 19.8 x 25 mm and 19.5 x 25.5 mm. In these two eggs, which were the female's first, the embryos died at an early stage.
To revert to the result of the first clutch, the eggs hatched on 3rd March (pipping commenced on 1st March) and 4th March. The chicks were removed for hand-rearing on 20th March. As with all subsequent chicks, they were closed-ringed with 5.5 mm rings when they were about 21 days old.

Rearing

All of the young have been well fed by their parents. The first two were removed because the youngest chick had a swollen leg from the age of about nine days. After a few days in the hand-rearing room the swelling had gone and the leg was normal. In the second nest, the second chick died at 10 days; the reason was unknown. The other chick was immediately removed for hand-rearing. In these two cases, the female laid again 31 and 19 days after the young were removed. The eggs of the second nest had been laid on 20th and 22nd April and hatched on 16th and 17th May. In the third nest eggs were laid on 15th and 18th June and hatched on 12th and 13th July. Both young were reared by the parents. The first left the nest on 28th August when it was 47 days old and the second did not until 13th September when it was 62 days. The pair did not nest again that year and their young were removed on 1st October. Their first three clutches had produced six eggs and six chicks, five of which were reared. Surprisingly four of them proved to be females!

In 1991, the female laid on 28th and 31st March. The second egg hatched on 27th April; the first egg was infertile. The chick was removed for hand-rearing at 11 days. It felt cold, the weather was not as warm as usual and the parents spent much of the time out of the nest. Two chicks keep each other warm - but one is more vulnerable to chilling. The chick was removed on 8th May but the female did not lay again until 20th and 23rd June. These eggs hatched on 18th and 19th July. The young were reared without incident and left the nest on 18th September (after 62 and 61 days).

Meanwhile, the very first youngster, hatched on 3rd March 1990 and paired to a 1988 Loro Parque hatched male, was nesting. On 25th February before she was 52 weeks old, she laid her first egg, and the second on 28th February. The nest was very wet and the embryos died about two thirds of the way through the incubation period. She laid the first egg of the second clutch on 22nd May and the second egg probably on 25th May. They hatched on 20th and 21st June. The chicks were very well cared for by the parents and left the nest on 19th August (60 and 59 days).
Immature plumage

It is interesting that although the young of the closely related Fairy and Red-flanked *Charmosyna placentis* Lorikeets can be sexed in nest feather those of Josephine's can not. The yellow feathers on the lower back and rump of the females do not appear for about four months and it is at least another two or three months before full adult plumage is acquired. Only one of the young (which is just independent at the time of writing) had yellow feathers on the back in nest feather. However, Anton Spenkelink, a most experienced breeder of this species, told me that this is no indication of sex as males can have yellow feathers and lose them in adult plumage. Immature plumage otherwise differs from that of the adults only in the less well defined shaft streaking on the nape and thighs. However, the beak is brown/orange (coral in adults), the cere is whitish (instead of coral), the iris is brown (orange in adults), the skin surrounding the eye is paler grey and the feet are greyish-pink (pale coral in adults).

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Josephine's Lorikeet aged 35 days, hatched at Palmitos Park.
Diet

Food for this species at Palmitos Park consists mainly of nectar (either Nektan-Lori, or a mixture of Milupa baby cereals and honey, with vitamins and minerals added occasionally) and fruit; each pair receives at least half an apple or half a pear daily, with other fruits in season, especially cactus fruit, of which nearly all lories are very fond. The Josephine's relish tinned sweet corn kernels, and the young breeding pair like our home-made rearing food which contains carrot, hard-boiled egg, non-fat cheese and whole grain bread. Soaked dried figs and raw carrot are also eaten. I have never tried the dry lory diets; if they would eat it, it could be given as a small part of the diet; nectar should always be available, given fresh twicely.

The hand-rearing food is varied; it contains Milupa baby cereal, wheat germ cereal and Nektan-lori; to most food is added papaya and a little of the rearing food described above. Liquid calcium or the calcium and mineral supplement Nektan MSA is added once daily.

Age at independence

Hand-reared young will start to feed themselves at an early age if given the opportunity. I gave a small container of warm rearing food to the first two when they were only five weeks old and they fed themselves immediately - in fact, they took an excessive amount. They each weighed 53 gms and I was giving them only 4 gms or 5 gms at a time, yet on the first day they filled their crops with 13 gms of food! If there are two young I do not encourage this early weaning because they spill food on each other's heads and object greatly to their feathers being cleaned.

Parent-reared young leave the nest then they are about seven weeks old and start to feed themselves on nectar almost immediately. However, I prefer to leave young lories with their parents for four or five weeks, so that they can learn as much natural behaviour as possible. Hand-reared young are as suitable as those which have been reared by their parents for breeding provided that they are reared with a sibling or introduced to their own species as soon as they are independent.

Future in aviculture

Josephine's Lorikeet was unknown in aviculture until the late 1970s. Not many have been imported and it is not well established. Perhaps only in Germany and the Netherlands are there a few breeding pairs. I do not know of any in the UK because of the shortage of females. Its future in aviculture does not seem assured,
and a European studbook would, if initiated, at least provide some ideas of the numbers held. The problem would be that nearly all are in private hands, not in zoos, and many private aviculturists are not good at co-operating in this way.

Status

Very little is known about this lorikeet in the wild. It occurs in the mountains of western and central New Guinea. It has been described as scarce and local but that may be due to lack of observers or the species being difficult to see in foliage. Whatever its status, aviculturists must do their best to ensure that this exquisite lorikeet is maintained in our aviaries - preferably in planted aviaries where the birds will live a more natural and active life and their "owners" will derive even greater enjoyment from their company.

REFERENCE


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