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# CHESTER ZOO NEWS



Zoological Gardens  
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1981 No. 9

# The Ring-tailed Lemur

The Ring-tailed Lemur, *Lemur catta*, exhibited at Chester Zoo since 1957, is a true Lemur, coming from Madagascar—the Lemurs taking the place of monkeys on this island. It is the most familiar member of the Lemurs, and inhabits the temperate woodlands and rocky areas from the centre to the south-western corner of the island. All Lemurs spend most of their time in trees, except perhaps the Ring-tailed Lemur, which spends a lot of time on the ground—being on the ground for up to a quarter of the daylight hours. A sun-lover, it can regularly be seen lying back, with arms and legs spread, sunbathing when the opportunity arises.

The Ring-tailed Lemurs have large glands on their arms, which secrete a strong-smelling scent. This scent is used to "mark" in their territory, by rubbing it on to various prominent objects; also, they frequently pull their tails over the glands, so that they can waft their scent into the air to spread the news that that particular animal is around. Further scent glands are situated at the base of the tail, and the Lemurs can often be seen standing on their hands, pressing the anal region along branches and door-posts in the cages, to mark them with their own personal scent. A number of animals have this adaptation and it is used as a marker to warn other animals that the territory has already been claimed.

The Lemurs are active and athletic animals, capable of remarkable jumps. They have long hands and feet, with leathery palms and soles, giving them a positive grip when moving through branches and over rocks. When at rest or sleep, they sit hunched up, with their heads between their knees and with their hands and feet gripping the branches, their tails being coiled around their bodies. They are crowd-loving animals, and seem happier when kept in groups.

In the wild, the breeding season is September to November, but Madagascar is in the Southern Hemisphere, so, in the Northern Hemisphere, this alters to correspond with spring, and the majority of births take place in March and April. There are usually twins or, less often, a single young born. For the first two weeks the young are difficult to see, clinging close to the mother's abdomen, although the small ringed tails can be a giveaway sign even at this stage. At two to three weeks, the young begin to be carried on the parent's back. The rest of the group take great interest in the babies and help in rearing them. The young become independent at about

six months and sexually mature at about 18 months, although males probably would not get the opportunity to mate if larger males existed within the group. The gestation period lasts approximately 125 to 128 days. In recent years, there has been a marked tendency for more male than female young to be born in zoos, and we are not yet sure why this should be so. It is possibly due to a complicated relationship between the high-quality diet and the size of the social groups in which these animals live, for both these factors are believed to be involved in sex selection.

Their food consists of a number of wild fruits, such as figs and bananas, and they also show a liking for the prickly pear cactus which grows in abundance in the rock crevices. Insects and birds' eggs are also eaten. The Lemur adapts itself to zoo life extremely well, and will eat most kinds of available fruits. It has a longevity record of 27 years in captivity, but the average life-span would appear to be much less than this.

We have had three pairs of twins born this year and these, with their parents, can be seen in the Monkey House. We have also released a small group on to the old Gibbon Island, Enclosure No. 40, and hope that this venture will be successful as a new way of exhibiting this handsome species.



RING-TAILED LEMUR WITH TWIN YOUNGSTERS  
By courtesy of Peter Wilcock, "Daily Star"

Front Cover:  
SNOWY OWL

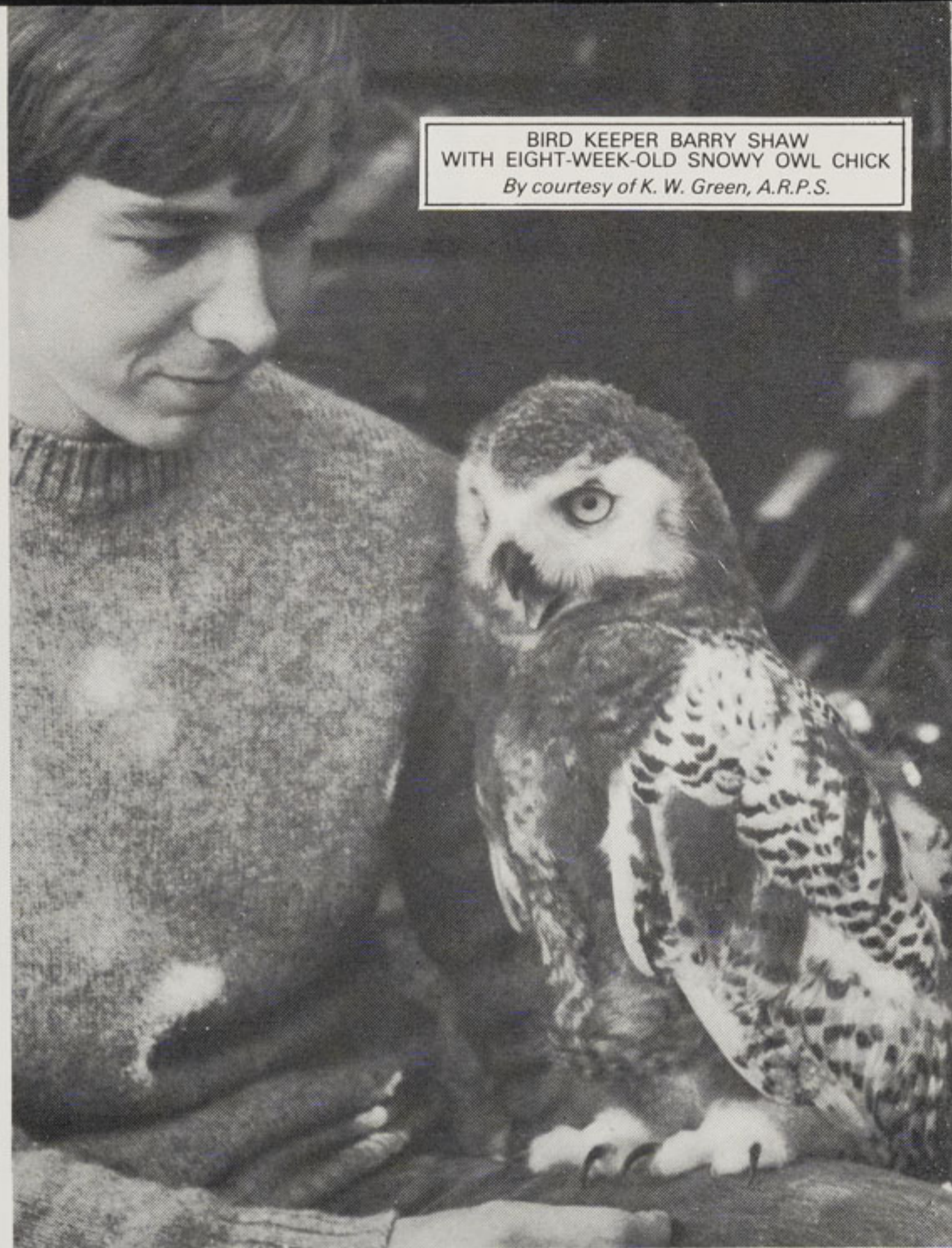
By courtesy of K. W. Green, A.R.P.S.

## Recent News from the Bird Section

Chester Zoo has not carried out a great deal of artificial incubation and hand-rearing of birds in the past, but, this year, we decided to try this technique with species other than waterfowl, in an attempt to increase our chances of rearing some of the young. Whilst not all our attempts were successful, two were—namely the Snowy Owl, *Nyctea scandiaca*, and the Blue-eyed Cockatoo, *Cacatua ophthalmica*.

The Snowy Owl adult female laid a total of four eggs, two of which were removed and placed under a bantam to incubate. The value of this method was emphasised when the female bird deserted the two eggs left with her, which addled. The two placed under the bantam hatched normally, and were taken by the keeper, Barry Shaw, to hand-rear. As with all newly-hatched birds, they were not fed for the first 36 hours, to ensure that the yolk sac was fully used up by the young owls. On Day Two, they were fed on minced beef with a raw egg added, and this continued three times per day for four days. On Day Six, the diet changed to minced day-old chicks (with the egg-sac, fluff and bones removed), given four times a day in quantities sufficient to satisfy the young.

Unfortunately, one of the young died at this stage, having always been weaker and less active than its sibling. The remaining owl continued to thrive on the minced chick diet, which had bone and down added from Day Ten. The size of the pieces given was increased, and were chopped rather than minced, and the quantity was as much as the owl would take four times a day. This went up to 12 chicks and, by the 21st day, whole mice were fed. All food had a vitamin/mineral supplement added.



BIRD KEEPER BARRY SHAW  
WITH EIGHT-WEEK-OLD SNOWY OWL CHICK  
By courtesy of K. W. Green, A.R.P.S.

On hatching, the owls had a sparse covering of white down and, by Day Ten, the remaining owl was covered with a grey fluffy down. The feathers started to grow on Day 17, and, by eight weeks (when the photograph was taken), it was half-feathered, with strong feet, and learning to fly.

The Blue-eyed Cockatoo, *Cacatua ophthalmica*, was much more demanding, and Senior Keeper Terry Sanders had a succession of nights when he fed the chick at 3.00 a.m.!

In 1980, the parent birds hatched only one of their two eggs, so this year, when they again laid two eggs, we

decided to remove one and incubate it artificially, in the hope that both eggs would be successfully hatched. However, after three days, the birds deserted the nest, and so the second egg was also removed and placed in the electric incubator, along with the first egg. The temperature was 98.5 deg. F., and the eggs were turned by hand five times per day. Both eggs developed normally, and the first hatched after 30 days, to produce a strong chick. The second egg failed to hatch and, on breaking open, was found to contain a well-developed chick, a few days off hatching. Cause of death of the unhatched chick was not determined, but it might have been something to do with the period it was left unincubated after the parent birds deserted it.

The chick was left in a wooden box, at a temperature of 90 to 95 deg. F., and fed on a diet of tinned baby foods every two hours for three weeks. This feeding regime demanded a great deal of time and dedication from Terry Sanders, and I am sure he was relieved when the chick was able to miss out the night-feeds. The chick weighed 16 grams at birth, and gained weight steadily at about 40 grams per week until, at 12 weeks, it now weighs 345 grams.



In addition to baby food, the chick now has chopped sunflower seed, and is being weaned off the baby food and on to seed.

The parent birds now have at least one other chick—perhaps two—for they laid a second clutch, which we left for them to raise themselves. By using such methods, not only can we learn a great deal about the methods of rearing parrots and other birds, but we can also encourage the parent birds to lay second clutches, and so increase the number of young. Such methods are of great importance when dealing with species endangered or threatened in the wild and, consequently, rare in captivity. By such means, the pressures can be taken off the wild populations and a contribution made toward safeguarding a species. We now have seven adult birds, in addition to the 1981 chicks.

Whilst artificial incubation and hand-rearing are more dramatic and certainly create great interest and enthusiasm among the staff, it is always very satisfying when the parent birds rear the young themselves, such as occurred with the Slender-billed Parrakeets, *Encognathus leptorhynchus*. The two birds were brought into the collection last autumn and were housed in the Oakfield aviaries. At that time, we did not know the sexes of the birds, so were particularly pleased when one of the pair started to spend a great deal of time in the hollow log provided.

The nest could not be inspected, and it was not until three fully-developed chicks emerged on 16th August that we were certain that the birds had bred. This is the first time that Chester has bred these South American birds and it is possibly a first for this country; whether or not this is so, we now have a good nucleus of these birds, and expect to be able to breed regularly from our stock of four adults and the three 1981 young birds.

P. M. C. Stevens,  
Curator of Birds.

# Kinkajous

During last year, a female Kinkajou, *Potos flavus*, was born, bringing our collection to three males and four females.

The Kinkajou comes from the tropical forests of Central and South America, where it is mostly active at night, spending most of the daylight hours sleeping in hollow logs and crevices. Kinkajous feed on a wide variety of foods, especially on fruits. The fur is yellowish-brown to red-brown; the middle of the back is darker, whilst the underside is much paler. The legs are short, but the long tail acts as a fifth limb, because it is able to grip branches. Several different groups of tree-living animals have such prehensile tails, the most spectacular being the Spider Monkey—also from Central and South America. Although not territorial, the Kinkajou produces a scent from naked glandular areas on either side of the face near the mouth, and on the belly, and marks its range by way of letting the opposite sexes know that they are in the area.

There does not appear to be a definite breeding season: birth takes place after a gestation period of 112 to 118 days. Usually a single youngster is born but, occasionally, there are twins. The baby weighs about 150 to 200 grams and is covered in a grey coat, the hair of which has dark tips. The eyes open seven to 19 days after birth, and solid food is taken at about two months old and, by four months old, the young Kinkajou is weaned. The adult coat is complete by about one year of age.

The Kinkajou has a very long tongue, which can reach the pulpy centres of fruits such as wild figs, guava, avocado and banana, of which they are very fond. Honey, too, has a great attraction, and their liking for this gives them a local name of "Honey Bear". Also, insects, nuts, eggs and young birds are eaten. Their zoo diet includes a wide range of fruit and vegetables, rice, meat and ZF6—a vitaminised meat diet.

Our seven Kinkajous can be seen in the Mammal House, Zoo Guide No. 84. The youngster has started to



KINKAJOU  
By courtesy of K. W. Green, A.R.P.S.

come out, but is still rather shy, preferring to venture into her enclosure when the visitors have all gone!

One of our females, "Honey", has something of a history, and came to Chester Zoo quite by chance. Someone had tried to smuggle her into the country, thereby contravening our Customs laws and anti-rabies regulations, which require a special licence for the import and export of all livestock. At this point, as with all livestock that is found to be smuggled, "Honey" was confiscated and, after a period of quarantine, she joined "Brandy", our breeding male. Normally, if a male wants—for instance—a piece of fruit which a female has, the female will let him have it. Not so with this new female! The male tried to take a morsel from her and she would have none of it, whereupon the male promptly bit off her nose! However, it is not quite as bad as it sounds, as part of the loss was the fleshy area, and "Honey" is able to breathe quite normally.

# Recent Births and Hatchings

1 Arabian Gazelle <i>Gazella arabica</i>	Birth
1 Guanaco <i>Lama guanicoe</i>	Birth
1 Red Lechwe <i>Kobus leche</i>	Birth
3 Slender-billed Parrakeets	
<i>Enicognathus leptorhynchus</i>	Hatched
2 Crimson-winged Parrakeets	
<i>Aprosmictus erythropterus</i>	Hatched



BABY ARABIAN GAZELLE  
By courtesy of K. W. Green, A.R.P.S.

## "Behind The Scenes"

During a recent Saturday afternoon, our Junior Members were given a "behind the scenes" tour of the Reptile House, Chimp dens and Penguin Pool.

Keith Brown, our Reptile Keeper, gave a conducted tour, explaining the special problems relating to managing a collection of reptiles coming from widely differing habitats. To illustrate this point, he let Junior Members touch a Royal Python—a species sometimes sold as a pet, but which is most unsuitable, needing specialist attention and a temperature of 80 to 85 deg. F., with a very high humidity.

The Chimpanzee dens were the next stop, where Nigel Deeble explained the problems of integrating a new chimpanzee into the existing group. This problem being particularly pertinent with the recent arrival of "Cleo" from another collection. She was used in the world of advertising, and is now rather slow in learning to relate to the other Chimpanzees.

Finally, to the Penguin Pool, where Deputy Curator of Birds Peter Bloomfield explained the intricacies of the filtration system, where the entire 90,000 gallons of water is filtered once every 12 hours. The Junior Members then had a special close-up view of the Penguins receiving their diet of mackerel and sprats, the larger Humboldt's eating the mackerel whole, whilst the smaller Black-footed Penguins preferred the sprats.

## Subscriptions

CHESTER ZOO NEWS is at present being produced every month and readers who would like to receive the magazine regularly can obtain subscription forms at the Souvenir Shops or the Office. The current charge for 12 issues, including postage, is £3.00 per year.

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