

is perhaps worth mentioning that Belle Vue had its own brewery, in addition to twenty separate licensed premises within the gardens in its heyday. On the zoological side the reptile house and elephant house are dealt with in particular detail, and plans of the latter are included. There is detailed information about many of the animals exhibited, and illustrations taken from old postcards; of particular interest is an excellent picture of Maude, the 'tigon' (tiger/lioness hybrid), who was

exhibited at Belle Vue until 1942.

Clinton Keeling is carving himself a very useful niche with Clam Publications, and making a vast amount of information on zoological history available to an otherwise untapped market. I find his style very readable, and he intersperses the zoological details with contemporary history and reflections on matters of the day. This book should definitely be on the shelves of anybody who is interested in the history of zoological collections.

Chris M. Moiser

Species Categories Being Revamped

IUCN's categories of threatened species (frequently cited in the Red Data Books) are used all around the world. For a number of years, however, the inadequacies of the current system have drawn criticism. Accordingly, the Species Survival Commission has embarked upon a revision of the categories on behalf of the Union. Dr Georgina Mace of the Zoological Society of London, an IUCN member, is taking the lead in this revision. It is hoped that the new category system will be approved and ready for use, at least for mammals and birds, by the time of the next IUCN General Assembly in November-December this year.

Reptiles for Sale

The First National Reptile Breeders Expo will be taking place in Florida from 1st to 4th August 1990. This will basically consist of a group of American reptile (mainly snake) breeders getting together to sell their surplus stock.

For details, contact: Wayne Hill, c/o Central Florida Herp. Society, P.O. Box 3277, Winter Haven, Florida 33881, U.S.A.

Forthcoming Reptile Symposia

The 14th International Herpetological Symposium on Captive Propagation and Husbandry will be held from 20th to 23rd June at the Dallas/Fort Worth Holiday Inn, Texas. For further information contact Dr Michael Uricheck on Tel. (203) 754-6839.

A Symposium on Turtles and Tortoises: Conservation and Captive Husbandry will be held from 10th to 12th August 1990 at Chapman College, Orange, California. For further information contact Sean McKeown, Fresno Zoo, 894 West Belmont Avenue, Fresno, California 93728, U.S.A.

Symposium Reprint Available

A reprint of the symposium *Biology of the Crocodylia* is now available at US\$10, including postage. The 232-page softbound volume contains 15 major papers. Make checks payable to the Zoological Society of San Diego, with a notation on the check "account #3-2022-875/972-Lance" and mail to Dr Valentine Lance, Center for Reproduction of Endangered Species, San Diego Zoo, P.O. Box 551, San Diego, California 92112, U.S.A.

CONSERVATION

Saving Rhinos in Kenya

by Anne Stewart

With impressive Mount Kenya in the background and herds of giraffe, zebra and elephant around you, it is a shock and a harsh reminder of man's callous greed to come across an eight foot high electrified fence patrolled by armed guards. The reason for this strict security is the protection of a much misunderstood animal, the rhinoceros.

With the number of black rhino in Kenya now standing at around 300, their protection is vital. In the 1970s there were approximately 20,000. Their slaughter since then has been on such a scale that it really is hard to comprehend. A remarkably determined woman named Anna Merz decided she would take it upon herself to try to save some of these surprisingly vulnerable animals, by financing a project herself. She persuaded the Craig family at Lewa Downs, a farm 200 miles north of Nairobi, to use some of their land as a fenced-off protected area for rhinos and other wild life.

The Kenyan government, who own the rhinos, would locate isolated animals, very vulnerable to poachers, and attempt to catch them and move them to safety there. It is far easier to kill a rhino and remove the horns than to capture and safely translocate. The poachers are Somali raiders or 'Shifta', heavily-armed gangs with automatic weapons; and the rewards are high. One horn could be worth £10,000. The horns, simply matted hair, are used as dagger handles for oil-rich macho men in North Yemen, and as dubious medicine in the Far East.

The Ngare Sergoi sanctuary, originally 5,000 acres in 1984, is now over 10,000 acres, surrounded by a 40

kilometre fence, with 5,000 volts running through it, run on solar power. Any thoughts that this is a glorified zoo should not be entertained. It is an enormous area where without the expert guidance of the guards and trackers you would be hard put even to spot a rhino.

I visited for two weeks with Mrs Merz, a woman whose single-minded determination to protect rhinos will not be deflected – and woe betide anyone who might hint in her presence that rhinos are stupid! When I arrived Anna had just spent five days saving a rhino in the Mathews range of mountains, leaving exhausted men half her age back in camp whilst she and her trackers doggedly searched the bush for eight hours a day. The whole episode sounded very gruelling, and although I pretended to be upset at missing it, I knew that I would have been among those back in camp waiting, and not out there trudging through dense undergrowth expecting to bump into a rhino at any moment.



Anna Merz feeds a young black rhino.

The Sanctuary is a well-organised concern, employing around 70 local staff. The animals are constantly guarded and the fence is kept in good repair and patrolled day and night. Radio contact is maintained over the whole vast area. With fourteen black and five white rhinos the stakes are high. Anna funds the operation with invaluable help from the Ngare Sergoi support group run by Andy Lodge at Columbus Zoo, P.O. Box 400, Powell, Ohio 43065, U.S.A. To maintain the Sanctuary Anna needs financial help. Anyone wishing to help or needing more information should write to Andy Lodge or to Anne Stewart, 49 Leighton Street, Woburn, Milton Keynes, MK17 9PH, U.K.

Help for Chamois in Italy

The Abruzzo chamois (*Rupicapra pyrenaica ornata*) has been saved from extinction in the Abruzzo National Park, Italy. A decade ago the last herd of this species numbered no more than 200 individuals concentrated in a small area. Thanks to the protection provided by the National Park, both in fighting poaching and in increasing public awareness of the need for wildlife conservation (both wolf and bear are also found in this area), chamois numbers have doubled. There are now 400-450 individuals in the Camosciara district of the Park.

Field research by biologists Sandro Lovari, an expert on mountain ungulates, and Maurizio Locati have revealed features peculiar to these animals, once thought to constitute a subspecies of the Alpine chamois (*R. rupicapra*), but now believed to be more closely related to the Pyrenean species (*R. pyrenaica*).

Long-term studies and efforts by WWF Italy to create a new protected area in Lama dei Peligni, a rocky mountain site not far from the Abruzzo National Park, have finally made possible the creation of a second herd of these animals. It is hoped that the area

to which they have been reintroduced will shortly be designated the Maiella National Park.

Tamarins survive fire

The last golden lion tamarins (*Leontopithecus r. rosalia*) in the wild were threatened recently when fire swept through Brazil's Poco das Antas Federal Biological Reserve 60 miles (100 km) north of Rio de Janeiro. The fire, which started on 7th February and continued for several weeks, has destroyed approximately 30 per cent of the 5,200 hectare reserve. However, preliminary assessments indicate that the 450 wild golden lion tamarins in the reserve have survived unharmed, though some other species, including the endangered maned sloth (*Bradypus torquatus*), have been affected.

Poco das Antas is a relic of Brazil's Atlantic forest, which once stretched along hundreds of miles of coast, but is now reduced to less than five per cent of its original extent. The part which was burned consisted mostly of degraded areas where the forest had begun to regenerate; it had been earmarked by the Golden Lion Tamarin Reintroduction Programme to serve as future habitat for captive-bred animals. (Tamarins can survive in forests as young as 15 years old.) There are already signs that natural regeneration has begun once more in the areas affected by the fire.

One feature of the disaster which offers encouragement for the future is the concern and support shown by the local community. This is undoubtedly thanks to the imaginative education programme which has been developed to promote public awareness of the need for conservation in the region.

There are at present well over 500 golden lion tamarins in captivity in more than 90 zoos around the world. In addition, 16 groups of captive-bred animals, a total of 58 individuals, are now living in the wild.

WWF News No.64, March/April 1990

Rarest Tortoise Breeding Well

The ploughshare tortoise (*Geochelone yniphora*), or 'angonoka', as it is called in its native Madagascar, derives its English name from the horn-like protrusion at the front of the plastron. The angonoka also has the dubious distinction of being probably the rarest tortoise in the world, the most optimistic recent estimate being 400 animals surviving in a remote corner of north-west Madagascar. In 1986 the Jersey Wildlife Preservation Trust set up a breeding centre for the species at the Ampijoroa Forestry Station, and five males and three females were installed by the end of that year. The first breeding season (1987) produced one hatchling.

In 1988 the three females laid at least 32 fertile eggs, but unfortunately, due to an abnormally long dry season, only nine hatchlings survived, the others having died because they were unable to dig their way to the surface through the rock-hard ground. In 1989 22 apparently good eggs were laid by two females: the third 'rested' this year, that is, did not lay any eggs. This is natural behaviour designed to save

strength, and occurs in many reptile species. The rains were late again, and J.W.P.T. conservation officer Don Reid, who manages the centre, decided to water and dig up each nest when the normal incubation period had elapsed, rebury any unhatched eggs and check them again at intervals of several days. This procedure resulted in eleven healthy babies; the remaining eggs were either infertile or failed to develop properly.

This Madagascar-based breeding project is proving extremely successful. The founder group is in good reproductive condition, and the number of surviving youngsters from the first three seasons nearly trebles the size of the captive herd. Furthermore, much has been learned about keeping and breeding the species in captivity. A Malagasy, Germain Rakotobearison, has received intensive training in the husbandry and breeding of tortoises, both on-site and at the International Training Centre in Jersey, and will be quite capable of taking over the captive breeding project when Don Reid moves on.

On *The Edge* No.59 (Jan. 1990).

Kiwi Incubation Update

Further to his article in I.Z.N. No.218, Ron Goudswaard reports that in January he tried artificial incubation from day 1 with two more eggs, turning them as described in the article. Neither of these eggs was successful. He is now trying another egg, this time increasing rotation to 180° night and morning. He will report on the results of this experiment in due course.
