

INTERNATIONAL ZOO NEWS

A magazine providing an intelligence service of news from and about zoos of the world.

Published by ZOO-CENTRUM, London, England.
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Editor: PETER BUNYARD, WORTHYVALE MANOR FARM, CAMELFORD, CORNWALL, UK.
Advisory Editor: GEOFFREY SCHOMBERG.

Annual Subscriptions
Surface mail: £15.00, US$40.00, DM62.50
Airmail: £19.00, US$50.00
Subscriptions should be prepaid and will continue automatically from year to year until cancelled by the subscriber. Please make cheques payable to Zoo-Centrum, and send to:
IZN Subscription Dept., Worthyvale Manor Farm,
Camelford, Cornwall, PL32 9TT, England. (Tel: 0840 212711)
Zoo-Centrum's bankers: National Westminster Bank Ltd., 26 Molesworth Street, Wadebridge, Cornwall, England.

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IZN's International Serial Number is NE ISSN 0020-9155.
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Printed by Penwell Ltd., Parkwood, Callington, Cornwall, England.

CONTENTS

International Zoo News No 191, Vol 32/3 **May/June 1985**

EDITORIAL 2

FEATURE ARTICLES

Displaying Natural Rearing of Beaver 6
Peter Karsten

Rock Hyrax—Little Brothers of Elephants 11
Roger Milstrey

Management of Siberian Lynx at Howletts Zoo Park 14
Douglas M Richardson

Keeping Dolphins Healthy (and Happy) at Brookfield Zoo, USA 18
Janis Ott-Joslin

Annual Reports 23

Conservation 37

International Zoo News 40

Not so for the trainers, who have worked hard at catching dolphins, lifting the 350 to 500 pound animals out of the water, and carrying them back to the water's edge. It's a lot of work, but it has paid off on numerous occasions in the form of early diagnoses and treatment.

In 1980, a new training regime, Random and Interrupted Reinforcement, was begun which made use of a variation in rewards, such as squirting the dolphins with a water bottle or rubbing them with a sponge, in addition to the usual fish reward. I am happy to report that since this training regime began, we have not seen any severe illnesses, nor have there been any incidences of gastric ulcers. While this may be merely a coincidence, the general attitude of the dolphins towards people and their environment has changed. They are much more active between shows and are more extroverted. When people other than their trainers come to the tank side, the dolphins bob up and down, watching them. The dolphins often come to the sides of the tank and solicit interaction, apparently looking forward to some new experience with us. I count this as another healthy sign and the best possible kind of medicine.

Dr Janis Ott-Joslin is Veterinarian-in-Charge at Brookfield Zoo, USA

READER'S LETTER:

Dear Sir,

I read with great interest the article in your January/February 1985 issue entitled "Penguins in Captivity". I noticed one sentence that you might want to clarify for your readers, in which Ms Stevenson states "With increased drilling for undersea oil and proposed developments in the Antarctic regions, no species of penguin can be considered safe, and two are already considered endangered—the black-footed or jackass penguin and Humboldt's penguin." Technically, according to the Convention on International Trade in Endangered Species (CITES), the only endangered penguin species is the Galapagos penguin. The Humboldt penguin is listed on Appendix One and the Black-footed penguin is listed on Appendix Two.

Sincerely,
Christina J Slager
Biologist, Penguin Environment, Steinhart Aquarium,
California Academy of Sciences, San Francisco, USA.

ANNUAL REPORTS

Taronga Zoo, Sydney and Western Plains Zoo, Dubbo, Australia in 1983/4.

MAMMALS

Two female platypus were netted in the upper reaches of the Duckmaloy River, near Oberon, NSW. Now Taronga's collection has two pairs, which, it is hoped, will induce breeding activity. Work is under way on building new nest boxes for the Platypus House as the old ones (which have been in existence since the house opened) are slowly deteriorating.

A group of four Tasmanian devils arrived from East Coast Bird Life and Animal Park in Tasmania. These animals were very shy initially and were seldom seen in the open, but gradually they have settled in and can now be easily observed by visitors.

Two male and two female kowari were acquired from the Sir Colin MacKenzie Zoological Park, increasing our collection to a total of nine animals. Also acquired from the Sir Colin MacKenzie Zoological Park, was a female ground cuscus (to the delight of our single male). She was reported in June as having a pouch young.

It has been a good year for births in the primate section. A male red-fronted lemur, female patas, crab-eating macaques, orang utan male 'Leroy' and a male and female mandrill were welcome additions.

It was sad to report the death of orang utan 'Roy' one month before the birth of his son Leroy. Roy was acquired by Taronga in 1963.

New blood was introduced to the mandrills in our collection. Male 'Baron' was acquired from Topeka Zoo, Kansas. The former dominant male of the group has been removed and is awaiting departure to Bullen's Animal World. 'Baron' was introduced to the group gradually with only minor upsets in the initial stages.

A black-backed jackal male was transferred to his new enclosure and introduced to the other male in the collection. They are now living and feeding together amicably.

Male and female maned wolves were introduced into the collection from Sao Paulo Zoo in December. Unfortunately the female died 3 days after acquisition. The male was transferred to Western Plains Zoo in April.

Two New Guinea wild dog females were born in April. They were later introduced to each other and transferred to the front display area by themselves. Both pups are enjoying their new enclosure and are providing a good display for visitors.

Caracal kittens were born in December— Male Chad and female Nyala.

The death of the old female grizzly bear, 35 years plus in June, reduced the stock to one remaining female.

The bobcat enclosure underwent renovations. It is now furnished with new soil, plants and rocks. Bobcats Robert and Tara, are enjoying the change in scenery.

New mince feed was introduced to the carnivores in December. Some animals are taking longer than others to adapt to their new diet.

Tigers, Quintus and Gai were moved to the nocturnal exhibit (part of the Water-hole). Lions, Betty, Lucretia and Caesar were also moved to their new enclosure in the Waterhole Exhibit. Introduction of male Caesar to female Betty was gradual as they were total strangers. Male Nero and female Vanessa were sent to Bullen's Animal World in December.

In May, jaguar Wendy gave birth to a male cub, Quito—the first cub born in Taronga since May 1958.

Sumatran tiger, Meta gave birth to 4 cubs in December, but sadly, only one survived—female Sinta. She was taken to the Orphanage for hand-raising.

Two male and one female Australian fur seals were born in November.

Female leopard seal Jacinta was found beached at Jervis Bay. This animal was rehabilitated at Taronga and later released with male Quinlan. Shortly after, male Simeon was released also.

Zebra male Toby was moved into the Waterhole Exhibit with the elands, blackbucks and ostriches. The sitatunga group was also moved to the Waterhole Exhibit during the year.

Three collared peccaries and two guanacos were born.

Giraffe male Charity (formerly Dakar) was acquired from Honolulu Zoo in November. Introduction to the herd went smoothly and he has become one of the family. Also in November giraffe Faye gave birth to female Hope.

Extensive renovations were done to the old Himalayan tahr mountain. It now tests the skills of the tahr's footing and becomes quite slippery when wet (even for the sure-footed tahrs).

In December we received one male and two female capybara from Johannesburg Zoo, South Africa. They underwent quarantine at Taronga and later departed for Western Plains Zoo.

A male white rhinoceros was born to Tessie at the Western Plains Zoo. The baby was very healthy at birth and excellent publicity was achieved.

Pregnant giraffe Fiona was sent to Taronga Zoo to boost the breeding protential of these animals in Australia. The giraffe gave birth to a healthy female calf approximately five months after arrival at Taronga.

The young Przewalski mares were introduced to the stallion and several successful matings were achieved. We expect the first births in October.

Other new arrivals during the year include maned wolves from Sao Paulo Zoo, Brazil, and four male scimitar-horned oryx from the Orana Zoo, New Zealand.

There were three Persian onager births during the year. Of these two survived, bringing the herd of these rare and beautiful equids to seven.

Soil conservation measures taken on newly acquired areas adjacent to the Zoo have been so successful in upgrading the quality of the land that some method of pasture control became necessary. Until such time as finances are available to establish exhibits on these areas, the establishment of a cattle herd was considered necessary to provide that pasture control and also to yield additional income. To this end, a cattle trading account is being established.

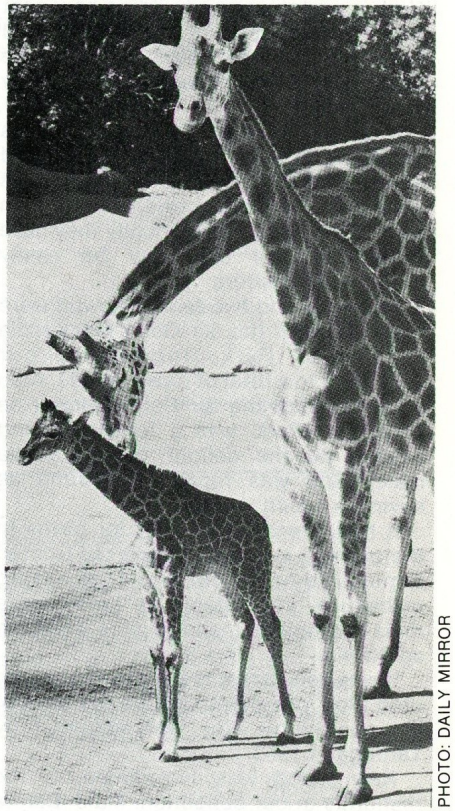


PHOTO: DAILY MIRROR

In November, Faye the giraffe, gave birth to a healthy female named Hope.

BIRDS

This year saw the completion of a new aviary for the only bird endemic to the Sydney area, the rock warbler. Native to the Hawkesbury sandstone region, this drab, unassuming little bird suspends its globe-shaped nest from a fine string of spider web. The nest is usually found in sandstone caves.

Valuable additions to the collection were three mute swans, to make up two pairs with our old male. These arrived with the kind assistance of the Northam Town Council, Western Australia, after four years of negotiations! There are probably less than 50 of these birds in captivity in Australia.

Breeding results continued to be good, with many rare species producing regularly. A pair of blue and yellow macaws produced several eggs. One of these survived to independence under the expert care of Supervisor of Birds, Les Clayton. This is now recorded in the Australasian Studbook for Macaws kept by Taronga Zoo.

An experiment to induce breeding in our small colony of ancient flamingos has shown promise. Surrounded by mirrors, donated by O'Brien Glass, the birds were tricked into thinking they were a colony of thousands and much courtship and nest-building was observed, but no eggs were laid—there's always next year!



PHOTO: SYDNEY MORNING HERALD

One of the highlights of the year was the successful breeding of a rare South American blue and yellow macaw.

REPTILES

Breeding successes this year, particularly amongst iguanas, were very pleasing. A record 45 rhinoceros iguanas hatched, bringing the total for a five-year period to 95. The Parque Zoologico Nacional in the Dominican Republic has once again been asked to participate in a release scheme for some of the surplus juveniles, while others have gone to zoos here and abroad.

A third generation breeding success, which is rare in captive reptiles, was achieved when 59 green iguanas hatched, their ancestors having arrived at Taronga Zoo in 1968. New bloodstock in the form of an adult male was imported in 1979, so a long and healthy future seems assured.

The Australian Museum, through Dr Harold Cogger, kindly supplied one male and two gravid female Fijian banded iguanas on a breeding loan. The four eggs laid by one of the females have hatched, giving great hopes that a breeding group may be permanently established.

One male and two female Fijian crested iguanas were also donated by Mrs Ivy Watkins on behalf of the Fijian Government. Taronga is the first zoo ever to have these rare lizards (described in 1981), a privilege we value highly. Four eggs have been laid but were all infertile.

A shipment of reptiles to London Zoo was by far the largest ever to depart from Taronga. A total of 88 specimens were sent, comprising 15 species, most of

which were bred at Taronga.

Assistance was rendered to the Australian Bureau of Customs in identifying the composition of reptile skin handbags and in accompanying officers for the purpose of identifying suspected exotic reptiles. Foreign reptiles, either confiscated or handed in by the public, included two species of European tortoises and several newts.

An unprecedented number of enquiries from Japanese tourists have been received for frill-necked lizards. This 'frilly mania', which has temporarily replaced the koala in popularity, can be traced to a frilled lizard featured in a Mitsubishi television commercial shown in Japan.

The number of reptile specimens born or hatched during this year totalled 208, from 19 species. Because of the difficulties encountered in finding suitable homes for surplus progeny, in future further species of reptiles will be prevented from reproducing.

FISH AND MARINE MAMMALS

Over the year the Aquarium exhibits have constantly changed. The total species numbers dropped from the very high count last year of 256 to its current level of 220, comprising almost 900 specimens displayed in 42 exhibit tanks.

Collecting excursions were carried out all year round from Broken Bay in the north to Port Hacking in the south. Collecting methods included scuba diving, trapping and beach seining. During the diving excursions many new collecting areas were discovered.

Some important marine animals have been donated, including 11 banded sea snakes from Dr H. Cogger and Dr G. Megden of the Australian Museum, 2 yellow-bellied sea snakes found washed up on beaches after storms and a tropical purple flying gurnard collected from Broken Bay. Since the introduction of a longevity list several years ago, there have been several interesting records, notably: 1 x carpet shark—11 yrs, 3 x Port Jackson sharks—14 yrs, 1 x butterfly cod—10 yrs, 1 x black trevally—13 yrs, 1 x painted crayfish—9 yrs, 1 x sea star—11 yrs in captivity.

During the year there was a potential threat to the lives of the fish and invertebrates in the Aquarium from a phenomenon called a 'Red Tide'. The 'Red Tide' consisted of a bloom of several species of protozoa and algae in huge numbers, imparting a reddish colour to the harbour water. Protozoa of some species produce a toxic substance which can poison fish and invertebrates. The possibility of a disaster was avoided by closing down the pumping operation during the peak of the bloom. These blooms depend on abnormal water conditions and disappear as quickly as they develop. During this worrying time, Channel 9 generously provided its helicopter to enable Zoo staff to get an aerial view of the extent of the problem.

A number of behavioural observations were made, including the fasting period of the common octopus after it lays its eggs, the hatching of a number of cuttlefish eggs and the spawning of the giant crab in the display tank. Equally of interest was the spawning of the striped anglerfish, yellow goby, maroon clownfish and, for the fourth year of observations, the cross-breeding pair of clownfish (*A. melanrotus* and *A. ephippium*).

As the new Aquarium moves closer to reality the staff have experimented with various aspects of design and maintenance of exhibits. These include development of a new overflow technique for the shark pool and the establishment of air lift filters on problem exhibits. Other technological advances which have been incorporated into the existing Aquarium include 2 stainless steel main pumps and a new compact heat exchanger which has increased the supply of heated salt water to the tropical exhibits by 20 per cent, while still using the existing boiler.

The limited research facilities in the Aquarium were used by several postgraduates from Sydney University involving studies into sound production in a number of species of fish and invertebrates. Breeding behaviours in a species of damsel fish, food digestion in the blackfish and the life cycle of the galeolaria worm were also studied.

Aquarium staff lectured to a number

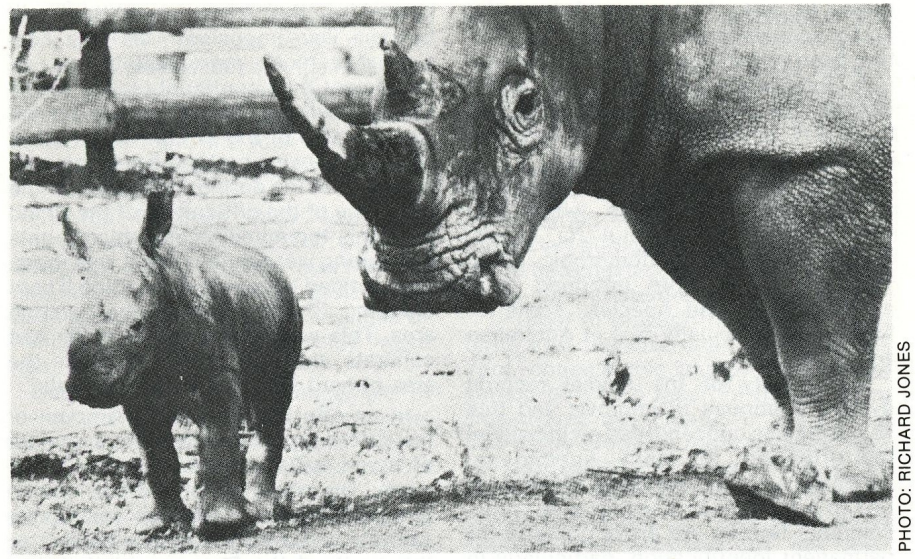


PHOTO: RICHARD JONES

The first successful birth of a white rhinoceros in Australia occurred at Western Plains Zoo in July.

of groups including Architecture students from Sydney University, and Animal Attendant, Animal Biology and Pet Care students from Sydney Technical College. Closer to home lectures were given to the Zoo Friends, Zoo-Eds, Zoo Guides and the Royal Zoological Society (Juniors).

The seal shows in the Taronga Theatre continued to delight large audiences of Zoo visitors and offered them an insight into the grace and agility of the seals. Hamish, the sub-Antarctic fur seal, gave special informative shows for busloads of elderly and handicapped visitors on the steps outside the Theatre. He was also the subject of a lecture on animal behaviour given to Zoo Friends.

The media gave particularly good coverage to seal events and Hamish travelled to Channel 7 studios for the launch of a new animal book. Two of our recovered leopard seals were released five miles east of Sydney from HMAS *Vampire* and we are grateful for the Navy's assistance.

ANIMAL HEALTH AND RESEARCH

Once more, the general health of the animal collection has remained good. Some aged animals of note died during the year. These included our last sun bear (hepatic carcinoma), a grizzly bear (degenerative nervous disease) and an old breeding female guanaco (mesothelioma). Routine faecal analysis has revealed a number of problem areas for parasitic infestations. Significantly, these are confined to the modern, more naturalistic enclosures. Increased vigilance and carefully planned strategic treatments and some husbandry modifications will be necessary to avoid problems.

Tuberculosis caused some concern during the year with the discovery of a recurrent infection in an aged male orang utan. Subsequent post-mortem examination demonstrated a mixed infection with both tuberculosis and histoplasmosis. All orang utans were subsequently retested and another, already under treatment, appears to be responding. It is hoped that this will be the last case of tuberculosis in our great apes. In-contact staff were also tested for tuberculosis, as well as for other potentially zoonotic diseases, and these tests were clear.

Diabetic chimpanzee, Suzie, con-

tinues to make history as the world's first insulin-dependent chimpanzee. She has been remarkably stable and is now fully integrated with the rest of the chimpanzee group. Thanks are again due to Dr S.K. Sinha for his continued help and advice on Suzie's treatment.

An important acquisition this year was a fibre-optic arthroscope which has proved particularly useful for laparoscopic sexing of monomorphic birds. This will allow more informed management of these species, some of which are particularly rare in Australian zoos.

The quality of the animal records system continues to improve, and this year work has concentrated on individual identification of many specimens. Coloured eartags have been adapted for use in a number of species, and inconspicuous tattoos are proving useful for permanent identification, particularly in primates. Not only will this provide for better management of the collection, but it assists greatly with identification and diagnosis of individual disease problems.

The Zoological Gardens, Edinburgh, Scotland in 1984

The Works Department

The Manpower Services Commission's Community Programme continued to enable development work to be carried out within the Zoo. The 1983/84 programme was completed at the end of May and the 1984/85 programme commenced on 1st June. The work described in this report was carried out under both these programmes and much was still on-going at the end of the year under review.

Important additional work was carried out in the White Rhinoceros exhibit. The protection of the trees in the main paddock by the use of upright round timber posts proved, in the end, to be unsatisfactory as, despite the provision of suitable rubbing posts, the animals preferred those protecting the trees! These were therefore replaced in stone and, although they currently look rather heavy, as the trees grow they will become less imposing. This was considered a much more satisfactory arrangement than continual repairs to the wooden barriers. Wood barriers on the western side of the exhibit which could not be otherwise protected were also replaced in stone during the course of the year. One of the difficulties of the Rhino exhibit is the muddy state which it gets into during wet weather and it was therefore decided to construct additional hard standing to the north of the existing area. This was completed in stone and concrete and now provides double the area of hard standing for the animals.

In an effort to reduce the amount of metal fencing around the Zoo, a number of stone walls replaced steel and wire mesh. The ones completed are located at the Rockhopper Penguins area, to the east of the Barbary Macaque exhibit, to the south of the Beaver exhibit and to the south of the main area of the Children's Farm. Some of the staff employed under the MSC programme have developed excellent skills in rock preparation and construction and this is reflected in the high standard achieved in work of this kind.

The major development work under the Community Programme has been the continuation of the rebuilding of the Rock Den area. Phase two of this work involved site preparation and the building of a new house to replace accommodation removed whilst enlarging the top three Rock Dens. The south facing wall of this new building, which consists of two dens with cubbing facilities and a general area, was faced with stone thus providing a backdrop to the exhibits themselves and greatly increasing both the surface area and the size of the cages. All existing metal work on these three exhibit areas other than the main structures was removed. The main structures were tested and replaced where necessary. Work in stone at the front of the exhibits was completed to allow for the provision of glass panels and three plant bays were constructed. The end of the year saw the completion, except for the placing of glass in the frames, of the top exhibit area.

The Tapir exhibit, which was nearly completed in 1983, was held up at the end of last year because of the imminent arrival of a calf. Work was again put in hand once the calf was born and had settled down and the rock work to the east and south-east corner of this exhibit was completed.

On the Elephant Walk two large aviaries were built together with the necessary housing. The purchase of materials for this particular project was made possible by the raffles arranged by members at the Winter evening meetings.

October saw the commencement of the second major development under the Community Programme, that of the redevelopment and enlargement of the Giraffe paddock. The first work to be completed was the demolition of the most northerly of the pig pens with its associated housing. The project calls for the development of a paddock similar in size to the existing one to the west and the replacement of the existing metal fencing with a ditch which would continue into the new area. A stone wall, some seven foot high, will run along the northern length of the new paddock adjoining the existing metal fence on the west side of the existing paddock. Work on this development will not be finished off until the Spring of 1985, but on completion it will provide not only more space for the giraffe and additional animals, but also greatly improve that area of the Zoo. The Society's neighbours in Kaims Road were informed of the nature of this development.

The third of the larger projects under the Community Programme was the redevelopment of the old Chimpanzee Tea Party area into internal and external housing for marmosets and tamarins. The construction of eight external glass fronted cages and the internal cages to back these up was completed by the end of the year. The only work outstanding is the provision of additional lighting and the creation of a visitor viewing area to the south. Plans were advanced for this to be completed early in 1985. The house itself has undergone trials and it has been confirmed that the necessary temperatures for marmosets and tamarins are easily maintained within the house. The Department of Agriculture and Fisheries approved the building for quarantine purposes.

Maintenance

There were 4,486 items of maintenance work carried out by the Works Department staff during the year. This work, as might be expected, was extremely varied and a number are described below.

In order to prevent the entry of small birds into the food area of the Stores Yard, considerable improvements were carried out. As a result of this an extra closed area was created in the central part of the Stores. A room formerly used for the storage of boxes and other equipment was modified to take dry food. During the course of these Main Store improvements the glass roof was carefully examined and repaired as necessary.

It is the Works Department's responsibility to move and erect all notices within the Park and animal movements and the completion of further new labels both for species and adoptions resulted in considerable work in this sector.

The weight of heavy snow fractured a main upright post in the Eagle's Aviary and with some difficulty this was removed and replaced.

The painters undertook various maintenance jobs during the year including the painting of the Owl Aviaries, the new Tropical Bird Aviaries, the Stores Yard, the Monkey House and the Education Centre. Improvement and maintenance works were also carried out in the Members' Kitchen and included tiling and painting.

The Collection—Primates:

There have been very few problems in the Primate Section during the year. The chimpanzee Annie had to be removed from the group to enable treatment of a suspected kidney infection, but she was reunited without problems in March. A little group sparring resulted in Peter having to be stitched round the eye, but this healed without complications. Cindy's baby, Lindsay, who was born on