

# OUR CONSERVATION, RESEARCH AND EDUCATION



## PRINCIPAL AREAS OF ACTIVITY

- Conservation and Research Projects
- Species Management Programs
- Australian Shark Attack File (ASAF)
- Australian Marine Mammal Research Centre (AMMRC)
- Australian Wildlife Health Network (AWHN)
- Australian Registry of Wildlife Health
- The Australasian Conservation Genetics Centre (ACGC)
- Public Education
- School Education

## GOALS

### CONSERVATION AND RESEARCH PROGRAMS

To advance understanding, appreciation, preservation, and protection of biodiversity through leadership, partnership and example

### EDUCATION PROGRAMS

To inspire and empower people to contribute to conservation by providing experiences that provoke empathy and respect for the environment through knowledge and appreciation of living things

In June, Western Plains Zoo celebrated the birth of the second Zebra foal born in two years to the Zoo's main breeding pair, 'Kampala' and 'Tano'. The female foal was named 'Pundamilia', which in Swahili means 'zebra'.

PHOTOGRAPH COURTESY FRANK REDWARD

## OBJECTIVES

### CONSERVATION AND RESEARCH PROGRAMS

- To contribute to the conservation and preservation of endangered Australian wildlife, and
- To contribute to the preservation of selected endangered species of exotic wildlife.

### EDUCATION PROGRAMS

- To develop awareness to inspire people to make a personal contribution to conservation,
- To extend the concept of our audience beyond the boundary of our Zoos, and
- To adopt an integrated approach to Zoo education programs.

## PERFORMANCE INDICATORS

	05	06
<b>Students visiting on a School Excursion</b>		
Taronga Zoo	83,979	89,175
Western Plains Zoo	15,811	14,760
<b>People participating in Public/Outreach Education Programs</b>		
Taronga Zoo	32,003	26,125
Western Plains Zoo	678	650
<b>Publications in referred journals</b>	29	33
<b>Conference and Workshop Proceedings delivered by Staff</b>	33	25
<b>Educational Lectures and Public Presentations delivered by Staff</b>	130	143

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## CONSERVATION AND RESEARCH PROGRAMS

### Species Management and Research Projects

#### Sydney Harbour Little Penguin Project

Two Zoo-bred and 28 rehabilitated wild Little Penguins were released into the Little Penguin population in Sydney Harbour as part of the collaborative program with the Department of Environment and Conservation (DEC). The captive-bred chicks were released at approximately eight weeks of age after fledging and were microchipped for future monitoring.

#### International Rhinoceros Foundation

The ZPB displays three species of rhinoceros which are also in cooperative international breeding programs and are the flagship species of Western Plains Zoo. The International Rhino Foundation (IRF) is closely associated with the programs. The ZPB is a founding and on-going member of the IRF which was initially created in 1989 to assist in the conservation of Black Rhinos in Zimbabwe and has since expanded its involvement to encompass all five species of rhinoceros. The IRF provides

technical, administrative and financial services and support for programs that emphasise intensive management and scientific research both in the wild and in captivity. The Board supports and cooperates with the IRF activities directed towards rhino conservation including the coordinated global captive breeding programs for Black, White and Greater One-horned Rhinos.

At Whipsnade Zoo, England, between 29-31 May, the IRF, in conjunction with the Zoological Society of London, hosted the second Global Captive Action Plan for Rhinos. This was attended by the ZPB's General Manager Life Sciences and Research, William Meikle.

The passing of Dr Tom Foose, the enthusiastic and highly effective Program Director of the IRF in May, was a shock to members and loss to rhino conservation.

#### Asian Elephant Conservation

The importation of eight Asian Elephants, three for Melbourne Zoo and five for Taronga Zoo for the Cooperative Conservation Program for this endangered species was twice further delayed this year.

In October, various Non-Government Organisations took court action claiming

that the zoos want elephants strictly for commercial reasons and there is no conservation value to the importation. The case was dismissed in February by the Administrative Appeals Tribunal (AAT) after an extremely detailed investigation. The AAT categorically confirmed that the zoos have the expertise to care for the biological and behavioural needs of the elephants, to establish a conservation breeding program for Asian Elephants and that the importation of these elephants from Thai work camps will have no detriment to wild populations.

In early June, protestors stopped the elephants from leaving the quarantine station in Thailand to be transported to the Cocos (Keeling) Islands for the next phase of their quarantine. For animal welfare reasons, it was decided to postpone the trip and to return the elephants to their quarantine facility. Negotiations are currently under way with the Thai Government to ensure a safe departure and assistance with the second transport attempt.

Life Sciences staff members, together with the Thai mahouts, have continued to care for Taronga's elephants and

**Left:** Gary Miller and Lucy Melo, Elephant Manager and Elephant Keeper (Pictured in Thailand)

*"This past year has certainly been challenging as well as rewarding. We have made the most of our time spent in Thailand with the elephants, further developing and strengthening our relationships with these amazing creatures. We are eagerly looking forward to delivering our five elephants to their new home at Taronga Zoo in the very near future."*

PHOTO COURTESY LISA KEEN

**Right:** The Minister for the Environment, the Hon. Bob Debus MP, officially launched the new Corroboree Frog conservation program at Taronga Zoo in May. The unique climate-controlled exhibit is located on one of Taronga's busiest boulevards, bringing public awareness of the frogs' plight to over 1.3 million visitors a year.

PHOTO COURTESY JAMES ALCOCK



their dedication and commitment to the program, and the individual elephants, is extraordinary and admirable.

The ZPB also continues its dedication to in situ Asian Elephant conservation with a contribution of \$29,600 going to the CITES Monitoring the Illegal Killing of Elephants (MIKE) program. This funding will be used to purchase computer equipment and support ranger training programs for countries in the South-east Asian range of the Asian Elephant including Thailand, Myanmar and Laos. The equipment, including Global Positioning devices, is vital for implementation of effective ranger training programs that provide information on current population estimates, causes of deaths and poaching incidents. Some will be used in elephant surveys in the MIKE sites of Selakphra and Kuiburi National Parks in Thailand.

Dr David Lawson, MIKE South-east Asia, was brought to Taronga Zoo by The Taronga Foundation to promote fundraising for the MIKE program. Funds raised enabled a law enforcement monitoring training workshop to be conducted in Myanmar

during November. Myanmar has the largest unfragmented areas of potential habitat for Asian Elephants across their geographic range and so habitat conservation in Myanmar serves the dual purpose of protecting the national population of elephants and ensuring the survival of the species. This training will strengthen field enforcement efforts in Myanmar's protected areas and includes practical field navigation techniques, procedures for reporting patrol activities and elephant observations and human-elephant conflict assessment. Nineteen staff from six protected areas and township forest officers participated.

The training emphasised practical skills that participants can teach to their junior staff in the MIKE sites and other protected areas. In Myanmar the MIKE sites are Shwe U-daung and Alaungdaw Kathapa and elephant monitoring programs exist in at least two other protected areas (Rakhine Yoma Elephant Range and Hukaung Valley Tiger Reserve) where the park wardens will implement MIKE reporting procedures as part of their normal management programs.

#### General

The ZPB provided assistance, by way of funds, staff or supplies, to a number of conservation-related activities including:

- Yadua Taba Island Fijian Crested Iguana Reserve,
- Macquarie University 's collaborative project on urban possums,
- reproductive research on Gorilla, Golden Cat, Giraffe and rhinoceros with the Department of Veterinary Science at the University of Sydney,
- Northern Hairy-nosed Wombat Recovery Program in Epping Forest National Park, Queensland,
- Cheetah conservation program, Mokolodi Wildlife Foundation, Botswana, which is directed at developing greater education about and support for the maintenance of Cheetah populations in areas used for livestock production and to minimise human-Cheetah conflict,
- Cuc Phuong Asian Turtle Conservation Program in Vietnam,
- Wildaid (Cambodia) – Dhole conservation,

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- African Wild Dog – Zimbabwe and Botswana,
- Brush-tailed Rock Wallaby at Jenolan Caves,
- Yellow-footed Rock Wallaby in the Flinders Ranges,
- Scott's Tree Kangaroo (Tenkile) project in New Guinea, where a moratorium has been placed on the hunting of this critically endangered species and alternative protein sources have been established for the local human population, such as farmed rabbits, through the Tenkile Alliance and the support of other Australasian Regional Association of Zoo Parks and Aquaria (ARAZPA) zoos,
- 21st Century Tiger in situ conservation initiatives across South-east Asia,
- Corroboree Frog Recovery Program at Kosciuszko National Park,
- Borneo Orang-utan Survival Foundation; and
- Uganda Wildlife Education Centre.

Details of further research and conservation projects, including those approved this year by the

ZPB Ethics Committee, can be found in Appendix 5 (Research Projects and Conservation Programs).

## Western Plains Zoo Species Management and Research Projects

### Reproductive Research

The on-going collaborative research partnership between WPZ and the Institute for Zoo and Wildlife Research (IZWR) encompasses several reproductive projects, including the artificial insemination of three Black Rhinoceros and the reproductive assessment of a number of Black and White Rhinoceros. These projects have resulted in the development of effective oestrus synchronisation protocols for female Black Rhinoceros and the early detection and surgical management of a testicular cancer in a male Black Rhinoceros.

A major goal for the collaboration is to develop a protocol for the harvest of oocytes (eggs) from living rhinoceros. Oocyte retrieval is a well established procedure in humans and domestic animals and is the means by which eggs are sourced for freezing and permanent storage and/or in vitro fertilisation programs. The availability

of these technologies for application to rhinoceros reproduction would increase the scope of genetically valuable animals to contribute to the gene pool. The subject animal for Western Plains Zoo's oocyte retrieval attempt is a genetically important female Black Rhinoceros which is unable to reproduce naturally due to degenerative uterine pathology. It is hoped that development of an oocyte retrieval protocol will allow her to contribute to Black Rhinoceros conservation despite her infertility.

Western Plains Zoo veterinarian, Dr Tim Portas, continued data collection for his research Masters, investigating the influence of management and environment on the fertility of male White Rhinoceros via reproductive tract ultrasonography, analysis of collected semen and characterisation of testosterone/testosterone metabolite levels in blood and faeces. This project is linked to a collaborative project with Reprogen in the Department of Veterinary Physiology at the University of Sydney aimed at developing a method for the sex differentiation of Black Rhinoceros sperm. The development of this technology will allow sperm of a known genotype to be used to produce offspring of the desired gender and thus offset the current male sex ratio bias inherent in captive Black Rhino breeding programs.

The Reproductive Laboratory at Western Plains Zoo plays an integral role in wildlife research by offering specialised wildlife assay services to the region's zoos and wildlife researchers. Reproductive hormones and their breakdown products can be measured in blood, faeces and other body products. The resultant hormone secretion profiles can be analysed to answer research questions pertinent to the reproductive function of the animal under investigation. This year the Reproductive Laboratory assisted with the investigation of a fertility problem in a group of Orang-utan, generated data for the investigation of the efficacy of a novel contraceptive in Guanaco, processed samples testing a new method for fertility testing male wombats and ran assays as part of a project exploring the effect of season and social hierarchy on fertility in Taronga's sea lions.

### Conservation Research

A collaborative research project between Western Plains Zoo and Charles Sturt University investigated the efficacy of radio transmitters attached by adhesive to the skin of captive Malleefowl. The attachment trial proved the transmitters to be durable with minimal impact on the birds. Consequently, 15 of the Zoo-bred Malleefowl released into the wild this year were fitted with transmitters for post-release monitoring which revealed that a significant proportion of these birds survived the critical early weeks after release.

### Animal Gene Storage Resource Centre of Australia (AGSRCA)

The Zoo's affiliation with the AGSRCA continues. The AGSRCA was established as a joint venture between the ZPB of NSW and the Monash Institute of Reproduction and Development in 1995 and has contributed to a range of Western Plains Zoo conservation programs including Black Rhinoceros breeding, Greater Bilby management, Common Wombat reproduction and African Wild Dog reproduction. Additionally, the AGRSCA maintains in storage a bank of frozen genetic material from significant zoo animals.

### Australian Shark Attack File (ASAF)

Since 1984, the ZPB has supported the development and maintenance of the ASAF, which is held at Taronga Zoo. Summary information can be accessed on the Zoo's web page at <http://www.zoo.nsw.gov.au>. The ASAF cooperates with the International Shark Attack File. John West, Manager, Life Sciences Operations, is the coordinator of the Australian file and is also a member of the International Shark Attack File Committee.

An average of three hours per week is spent updating the file when new cases are reported and responding to shark attack enquiries. During this year there were over 240 written and telephone requests for information from the media, university researchers, government agencies, book publishers, international and general public enquiries. Mr. West was invited by the NSW Minister for Primary Industries

(DPI) to participate in a review by a scientific panel of shark experts on current best-practice in mitigating the risk of shark attacks in NSW.

### Australian Marine Mammal Research Centre (AMMRC)

AMMRC, a joint research initiative of the ZPB and The University of Sydney, celebrated its 10th year of operation in June. AMMRC Director, Dr Tracey Rogers, was the recipient of the 2005 Young Tall Poppy Award from the Australian Institute of Political Science.

AMMRC projects included:

#### Human Influences and Global Change on Polar Top Order Predators: Past and Present

This study integrates a scientific and educational/outreach program that discusses the influences of human activity on Antarctic seal populations both in the past, due to whaling, and in the present, due to climatic warming and establishes baselines for future monitoring.

#### Factors Influencing Acoustic Surveys of Marine Mammals

Acoustic surveys were investigated and offered promise for estimating the distribution and abundance of Antarctic pack-ice seals. To predict the area surveyed researchers modelled transmission loss and measurements of received background levels and to identify the number of seals calling, researchers modelled calling behaviour.

#### The Antarctic Pack Ice Seal Program

Leopard Seals occupy a high trophic level within the Antarctic ecosystem and have a potential role as an indicator species for assessing that ecosystem's changes. This project looks at the health status, foraging behaviour and satellite-tracked movements of Leopard Seals and is important in clinical applications for captive and stranded Leopard Seals in Australia. This program was the recipient of the 2006 ARAZPA Research Award.

#### Reproductive and Stress Hormones in Marine Mammals

This program is developing non-invasive techniques to determine reproductive and stress hormones in whales, dolphins and Antarctic seals. Its long-term focus



is to develop non-invasive techniques that can be used with these animals worldwide. Dr Carolyn Hogg received the Frederick Franklin Award for Innovative Research from the International Society of Marine Mammalogy for the whale hormone program.

#### Vocal Behaviour in Seals

The AMMRC research team is investigating vocal recognition in the Australian Fur and the Antarctic Leopard and Weddell Seals. This research assesses vocal recognition patterns in these species, as well as describing calls and geographic variation between populations.

**Opposite:** The ZPB supports the work of the 21st Century Tiger project which supports conservation work with remaining tiger populations in the wild.

**Above:** Heidi Quine, Keeper, Western Plains Zoo

*"As a keeper at Western Plains Zoo, I love the challenge of keeping the animals I work with interested and stimulated. Whether it is hiding food for the Maned Wolves, training our Spider Monkeys or filling emu eggs with mealworms for the meerkats, I go home knowing I have helped to enrich the lives of the animals I work alongside."*

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## Australian Wildlife Health Network (AWHN)

Wildlife disease surveillance is coordinated nationally through the AWHN, which is co-hosted by the ZPB and NSW Agriculture. The network's aim is "to promote and facilitate collaborative links in the investigation and management of wildlife health in support of human and animal health, biodiversity and trade." The network better prepares Australia for serious disease outbreaks in its wild and feral animal populations.

A priority is to critically assess the risks posed by wild animals, particularly feral animals, in the advent of an exotic animal disease entering Australia. Other activities

**Above:** In July, the new Aboriginal Education program 'Animals of the Dreaming' was launched by the NSW Minister for Education and Training, Ms Carmel Tebbutt. The launch featured traditional dancing and playing of the didgeridoo.

PHOTO COURTESY JAMES ALCOCK

**Opposite:** Hand-raised Ring-tail possums like 'Lumeah' are ambassadors in Taronga Zoo's Education Centre. Visiting school kids have the opportunity to see some of Australia's unique native fauna up close.

PHOTO COURTESY JAMES ALCOCK

include: preparation of wildlife disease reports for the Office International des Epizooties and Animal Health Surveillance Quarterly; surveillance and dissemination of surveillance data; education and training in wildlife disease preparedness and response; facilitation of wildlife disease investigations; prioritisation of wildlife research questions; and development of protocols.

State and Territory coordinators report on six disease categories, which form the basis for general wildlife disease surveillance. The network has been involved with numerous wildlife mortality events, or suspected emergency animal disease events, this year. It assists the National Wild Bird Surveillance Steering Committee in management of avian influenza surveillance data, chairs the Australian Bat Lyssavirus focus group and represents Australia in a number of overseas committees.

## The Australasian Conservation Genetics Centre (ACGC)

In October, the ACGC, headed by Dr Karen Firestone, successfully applied for funding for a number of exciting projects. Among these are an Australian Research Council funded project aimed at using wildlife forensic genetic techniques to identify the cause of decline among Brush-tailed Tree-Rats (*Conilurus penicillata*), a native rodent in northern Australia. This project is being undertaken in collaboration with Charles Darwin University and the Northern Territory Department of Natural Resources, Environment and the Arts. Trace saliva remains found on retrieved radio collars and carcasses are being used to identify if cats are, indeed, killing our native rodents. Tree rats are currently being released into study sites in the Northern Territory.

Recent advances in genetic techniques for faecal DNA in Spotted-tailed Quolls have enabled reliable identification of individual animals from faeces found on latrines, providing significant advances in understanding the social structure of this species. Ms Monica Ruibal (PhD student) has been able to show that latrine use changes over time in keeping

with the breeding cycle of females, and that, typically, one or two females will use a latrine, but many males will use these 'signaling posts.'

The ACGC also awarded the ZPB Prize for Conservation, a \$250 award given for the best postgraduate presentation at the School of Biological Earth and Environmental Sciences (BEES), University of NSW, to Elizabeth Heagney for her work on pelagic fish in coastal ecosystems.

## EDUCATION PROGRAMS

### Visitor Education

The Visitor Education section manages the concepts and content for all visitor education activities. Effective education enriches the visitor's experience by making it more meaningful and enjoyable. Informal learning opportunities including keeper presentations and shows, species signs, graphics and interactive displays give visitors first-hand learning experiences and a keener awareness and appreciation of wildlife and the environment.

Major activities undertaken at Taronga Zoo included:

- managing the development of interpretive works with consultants for 'Great Southern Oceans' and the new Seal Theatre,
- managing the development of interpretive themes and media for the planned redevelopment of Taronga's Main Entrance plaza,
- developing heritage focus interpretive graphics across the Zoo for the Indian Elephant Temple, the carronades at 'Backyard to Bush' and the Taronga Food Market,
- developing and implementing interpretive signage about the Corroboree Frog recovery project,
- working in collaboration with Mosman Council to interpret the artists' camp at Sirius Cove,
- developing new education signage, including labels, small and large interpretive graphics and interactives throughout the Zoo,



- continuous evaluation and development of keeper presentations and shows,
- conducting interpretation workshops to enhance keeper presentation skills and content; and
- developing school holiday activities.

Major undertakings at Western Plains Zoo included:

- finalising the Zoo-wide interpretation strategy to provide interpretive focus points throughout the Zoo where simple, effective interactives, colourful graphics and sculptures give the visitor a greater understanding of animals and their habitats.

Public education programs offered by the Zoos' Education Centres included:

- **Zoo Adventures** – In the 10th year of the program, participation has increased by 14% with numbers increasing from 402 in 2005 to 460 children in 2006. Overall, 1,433 children at Taronga Zoo and 417 children at Western Plains Zoo have enjoyed a unique Zoo Adventures experience.
- **Roar & Snore** – Taronga's popular sleepover program has surpassed budget targets with over 4,075

visitors representing an increase of 30% on last year. Guest feedback on the program has been amazing with participants taking away important conservation messages from their unique insight of Taronga Zoo, clearly indicating that Roar & Snore has become a 'must do' conservation education experience.

Western Plains Zoo Roar & Snore program has also had a successful year with new tents being purchased and significant landscaping carried out to enhance the site. Roar & Snore (previously called Bunk with the Beasts) was successfully re-launched and 650 participated in the program.

- **Youth At The Zoo (YATZ)** – the ZPB's youth volunteer program has over 180 active members at both Zoos who volunteer their time in a range of activities from assisting keepers and fundraising events to taking part in the annual YATZ Eco Fair at 'Backyard to Bush'. The program is set to grow and develop through its new three-year partnership with Boral Resources Pty Ltd, as new uniforms and brochures are developed and membership drives are held.

- **NAIDOC** – NAIDOC at Taronga continued to expand in 2006 with the Zoo showcasing a number of spectacular cultural events. Visitors were enthralled as ancient Aboriginal Dreaming stories were brought to life by the birds and reptiles. This year, visitors to Taronga also had the opportunity help develop the Zoo's own 'Sea of Hands' as well as take part in an Aboriginal cultural tour of the 'Platypus Pools'.

- **Zoo Birthday Parties** – 'Backyard to Bush' hosted parties for 951 children during the year, a huge increase of 265% on last year.

- **Fearless at Taronga** – with a 98% success rate, this program is changing people's lives. Over 100 past arachnophobes have participated and left the program not only with a new appreciation of these once-feared animals but confidently being able to capture a Huntsman spider or even hold one in their hands. They are now able to enjoy a fearless summer or holiday in the bush!

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## Volunteers in Education

The Zoo Friends Volunteers are a vital component of the Zoos' visitor education programs, carrying out a wide range of educational activities and having a presence everyday in the Zoo grounds. From the more formal tours to the informal touch-tables and animal handling sessions, they communicate with tens of thousands of Zoo visitors every year. All volunteer animal handlers are required to be trained and are authorised under the Animal Research Act.

Gold Tours, Aussie Walkabout, and various VIP tours at Taronga Zoo and Early Morning Walks and coach tours at Western Plains Zoo were conducted by Zoo Friends Volunteers.

Animal Encounters sessions at 'Backyard to Bush' and in the Australian section at Taronga were staffed daily by the Volunteers. These close encounters with living animals provide an experience that is a highlight of a Zoo visit for people of all ages.

The Volunteers' Speakers Panel provides trained guest speakers for community organisations such as Probud and seniors clubs.

## School Education

Formal or school education operates as a funded partnership between the NSW Department of Education and Training, the Sydney Metropolitan Catholic Education System and corporate supporters. It provides a professional teaching service to a wide variety of groups including school students, pre-school students, community groups, teachers, tertiary students and overseas students. These education programs are delivered at 'Backyard to Bush', the Taronga Zoo Education Centre, the Western Plains Zoo Armata Environmental Education Centre and through various outreach programs including the Zoomobiles.

A total of 89,175 students visited Taronga Zoo as part of a curriculum-based educational excursion. This is an increase of 6.2% on last year, while another 14,760 students visited Western Plains Zoo. Of the total 103,935 students who visited the Zoos, 61,528 had an education lesson/workshop, which represents 60% of the students. The other 42,402 had a self-guided excursion supported by curriculum-related teacher resources.

A new cultural learning venue was opened at Taronga's 'Wild Asia'. Called the Village School, it is the new venue for the Rainforests and Endangered Species workshops for primary students. Feedback has been extremely positive from teachers and students.

Formal education at Taronga Zoo has been reviewed as part of the ZPB's education strategy and a curriculum mapping exercise was undertaken to maximise the educational outcomes for different student stages.

## 'Backyard to Bush'

'Backyard to Bush' delivered hands-on education workshops to over 19,370 students, an 11% increase from the previous year and continued to provide fun and creative ways of imparting the Zoo's conservation and environmental messages to visitors. In July, the new aboriginal education program 'Animals of the Dreaming' was launched by the NSW Minister for Education and Training, the Hon Carmel Tebbutt MP. This program, and the new full-time Aboriginal Education Officer position, is funded by the Department of Education and Training and the Aboriginal Programs Unit.

The 'Backyard to Bush' team hosted several new education events including an 'Animals of the Dreaming' workshop for 1,600 Girls Brigade members. A new wildlife workshop, 'Dangerous Australians', was created providing participants with the opportunity to learn about Australia's 'dangerous' animals such as Funnel Web Spiders, crocodiles and Red-bellied Black Snakes.

Sydney Water Month provided a new interactive experience with a dripping tap and shower head displays as well as educational talks by a water expert. To complement these water saving exhibits, a new show was created featuring energy saving, anti-pollution and recycling messages.

'Who Stole the Bush' is a new vacation care adventure. Children are taken on a journey of exploration and investigation as they become 'super sleuths' for this

experience. Students can also become 'Rescue Rangers' exploring the bush to discover the right habitat for native Australian animals. This workshop enables students to explore and understand animals' adaptations and their environments.

#### Taronga Zoo's Education Centre

A total 35,672 students received a curriculum-related lesson at the Education Centre with demand exceeding supply. Four new teacher resources were developed to enhance student learning including the "Rainforests" and "Endangered Species" resources designed to complement the new workshops delivered at 'Wild Asia' where over 2000 students have participated in a curriculum-related lesson at the new Village School classroom.

Funding was received as part of the NSW Department of Education Quality Teaching Project to maximise student outcomes and to gauge the effectiveness of Zoo workshops. This project is on-going and will be completed in September 2007.

#### Western Plains Zoo's Armati Environmental Education Centre

The Armati Environmental Education Centre at Western Plains Zoo delivered programs to a total of 14,760 students, Zoo visitors and the wider community. This included more than 6,486 school students visiting as part of school excursion and classroom lesson. Early morning guided walks and self-guided excursions were undertaken by more than 6,761 students.

New animal enclosures for mammals and birds have been constructed to house contact animals to enhance all education programs and the overall Zoo experience.

#### Outreach Education

Outreach education programs offered by the Zoos' Education Centres included:

- **The Department of Education and Training (DET) Zoomobile**  
This outreach program delivered animal-based lessons to 14,142

students from 153 schools. The Zoomobile also visited remand centres, hospital schools, special schools and isolated schools. The total includes 5,625 students who took part in the '**Animals of the Dreaming**' Aboriginal Outreach Education program. This program is delivered with Col Hardy, a highly respected Aboriginal Elder. The DET Zoomobile visited students as part of regional programs delivered in partnership with other organisations including 1,991 students for Evolution of the Australian Biota – a joint program with the Australian Museum and the Royal Botanic Gardens – and 1,888 students involved in Biodiversity programs delivered in partnership with nine different Environmental Education Centres.

- **The St George Foundation Zoomobile**

This successful program continues to generate high repeat visitation and booking capacity. It reached more than 11,983 people in pre-schools, day care centres and nursing homes this year. The Zoomobile also took part in 17 large community outdoor events, such as fetes, delivering conservation messages to thousands of people.

#### Other Education Programs

Additional programs offered and undertaken by the Zoo Education division include:

- **Work Experience**  
Placements for 273 students from Years 10 to 12 were provided at Taronga Zoo and 61 students at Western Plains Zoo,
- **Meet a Keeper**  
418 students at Taronga Zoo and 141 students at Western Plains Zoo undertook this one-day vocational education program to obtain an understanding of zookeeping as a career,
- **'Zoonsnooz'**  
Sleepover program was provided for 2,516 school students at Taronga



Zoo (an increase of 11%) and 912 students at Western Plains Zoo,

- **Wildlife Workshops**  
820 students participated in this overseas language program,
- **Professional Development**  
355 teachers attended previews and in-service sessions at 'Wild Asia',
- **The Education Centre Library**  
Continued to provide quality support to keepers, education staff and the public in the pursuit of specialised knowledge and information.

**Opposite:** The Australian Marine Mammal Research Centre, a joint research initiative of the ZPB and The University of Sydney, celebrated its tenth year of operation in June.

PHOTO COURTESY DR TRACEY ROGERS

**Above:** During the year, more than 4,075 people enjoyed the opportunity to get close to animals and stay overnight at Taronga Zoo as part of the Education Centre's popular 'Roar and Snore' program.