



Annual Report 2009

THE MALAYSIAN ZOOLOGICAL SOCIETY



OUR PATRON



The Malaysian Zoological Society would like to thank our Patron
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Sultan dan Yang Dipertuan Negeri Selangor Darul Ehsan
Serta Segala Daerah Takluknya

THE SULTAN OF SELANGOR



CONTENTS

01	OFFICE BEARERS
03	CHAIRMAN'S REPORT
05	DIRECTOR'S REPORT
07	FINANCE & ADMINISTRATION
09	PUBLIC AFFAIRS & MARKETING
13	CUSTOMER SERVICE
15	DEVELOPMENT & MAINTENANCE
17	EDUCATION
21	PARK AND GARDENS
25	ZOOLOGY
31	HOSPITAL & VETERINARY SERVICES
35	TUNKU ABDUL RAHMAN AQUARIUM
37	DONORS & SPONSORS
38	STAFF LIST
39	STATISTICAL ANALYSIS
41	ANIMAL INVENTORY
42	CENSUS
47	APPRECIATION

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Y.Bhg. Dato' Ismail Hutson, D.P.M.S., K.M.N., P.J.K., J.P.

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Y.Bhg. Dato' Hj. Zaharin Hj. Md. Arif, D.P.T.J.
En. Mohamed Seth Ismail
En. Rahmat Ahmat Lana
Mr. James Bush, M.I.P.R.M
Pn. Azizah Abdul Ghani

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Prof. Dr. Zulkifli Idrus
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Pn. Azizah Abdul Ghani
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Pn. Hajah Khairiah Mohd Shariff (Department of Wildlife and National Parks Peninsular Malaysia)
En. Wanchick Zainal Abidin (Selangor State Government)
En. Rahman@Abd. Rahman Yusof (Ministry of Natural Resources & Environment Malaysia)
Dr. Mohamad Ngah, Ph.D (Director of Zoo Negara)

SECRETARIES

Fiscal Corporate Services Sdn. Bhd.

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Khoo, Wong & Chan

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Management	Y.Bhg. Dato' Ismail Hutson, D.P.M.S., K.M.N., P.J.K., J.P.
Animal Welfare & Ethics	Prof. Dr. Zulkifli Idrus
Finance	Y.Bhg. Dato' Ismail Hutson, D.P.M.S., K.M.N., P.J.K., J.P.
HR & Administration.	En. Rahmat Ahmat Lana
Development & Planning	Y.Bhg. Dato' Hj. Zaharin Hj. Md. Arif, D.P.T.J.
Public Affairs & Marketing	Pn. Azizah Abdul Ghani
Education & Training	Mr. James Bush, M.I.P.R.M
Park & Gardens	En. Mohamed Seth Ismail



Dato' Ismail Hutson
Chairman
Malaysian Zoological
Society

CHAIRMAN'S REPORT

INCOME AND EXPENDITURE

The management of the Malaysian Zoological Society was confronted with the anxiety of a tough year in 2009. This was due to the anticipation of the economic downturn worldwide and we expected that Malaysia would not be spared. We predicted that our loyal sponsors had to make hard decisions during this tough time. On behalf of the Malaysian Zoological Society, I would like to express our utmost gratitude for the continued generous support of individuals, firms and organizations for the RM395,663.00 received during the year as opposed to RM713,880.00 in the previous year, in spite of the tough business environment.

Further, on behalf of the Council, I am also grateful for the support from the visitors of Zoo Negara which has resulted in the historical record of gate income of RM10,199,211.00 which covered 86% of the annual income. I am also grateful to The Honorable Dato' Sri Azalina Dato' Othman Said, the Minister of Tourism Malaysia who graciously launched **"Zoom Zoo Negara"** on 12th January. We are sure that the favourable results that we saw were the outcome of one of the numerous domestic tourism campaigns carried out by the Ministry of Tourism Malaysia (MoTour). With the continued collaboration, Zoo Negara will excel as a major tourist attraction.

The year saw yet another satisfactory record surplus of Operation Expenditure (OPEX) amounting to RM800,000.00 as compared to RM479,151.00 for 2008. This was the fifth consecutive year of improved OPEX performances. I congratulate the staff of Zoo Negara for their continuing efforts in controlling expenditure and creating events which led to better gate sales. I strongly believe that our employees are the cornerstone of our success; I am sure that we not only endured the 2009 business downturn but we have found the ways to attract more visitors during difficult times.

DEVELOPMENT

Capital Expenditure (CAPEX) for the year was RM1,357,252.00 as opposed to RM409,677.00 in 2008. The Society received contributions in kind from the Ministry of Natural Resources and Environment Malaysia (NRE) and MoTour in 2008. The projects completed during the year were the new Milky Stork Aviary (RM200,000.00), the Rainwater Harvesting System (RM383,738.00), the upgrading of the frontage at the Main Entrance (RM1,265,045.00) and the animal sculptures at the entrance of Parking A (RM198,800.00). This gave a total value of RM2,047,583.00. On behalf of the Council, a big thank you to all supporters who made donations in cash or in kind.



PROMOTIONAL EVENTS & ACTIVITIES

Zoo Negara launched the **"Visit Zoo Negara Year"** with eight new multi-coloured battery operated trams on 1st January. Present for the launching was The Honorable En. Jelaing Anak Mersat, Deputy Minister Domestic Trade and Consumer Affairs who took the first tram ride tour around the Tunku Abdul Rahman Lake.

At the Tunku Abdul Rahman Hall, En. Jelaing launched the **Zoo Negara Loyalty Card** targeted at 3 - 12 year old children with unlimited entry for one year. As of 31st December about 3,000 children subscribed to the Zoo Negara Loyalty Card.

Four Council members, Y. Bhg. Dato' Hj. Zaharin Hj. Md. Arif, En. Rahmat Ahmat Lana, Pn. Azizah Abdul Ghani and myself went to the Istana Kayangan Shah Alam to seek an audience with our Patron, D.Y.M.M Sultan Sharafuddin Idris Shah on 16th March.

FUTURE PLANS

The Society had the opportunity to brief 35 senior government officials from three Ministries, namely NRE, MoTour and Ministry of Housing and Local Government (MHLG) regarding the zoo development programme, wildlife conservation, its contribution as a tourist attraction and funding on 12th October. These government officials were headed by The Honourable Datuk Sri Douglas Uggah Embas, Minister of NRE and The Honourable Dato' Sri Dr. Ng Yen Yen, Minister of MoTour. Dr. Mohamad Ngah, the Director of Zoo Negara was present to deliberate on the strengths, weaknesses, opportunities and threats (SWOT) analysis of Zoo Negara. In a nutshell, the government officials were informed that Zoo Negara has been operating with its own OPEX since the zoo was established in 1963; however what we needed from the government is funding assistance for the development and renovation of several large exhibits such as the Elephant Exhibit and Bear Complex.

There was a closed door meeting among the government officials for about three hours thereafter and I am pleased to inform that the Society was told that the government is supportive of the society and a budget of about RM5.7 million for upgrading and improvement purposes will be tabled to the government for approval.

Finally, I wish to thank the Council Members of the Society for their advice and assistance during the year and sincere appreciation is extended to the dedicated staff for their hard work during the year.





DIRECTOR'S REPORT



Dr. Mohamad Ngah
Director
Zoo Negara

Although Zoo Negara Malaysia was 46 years old this year, the approach of marketing the zoo under challenging economic conditions is not clear. We anticipated that budget allowances simply are not there and with less money to go around, proposals for sponsorships were subjected to higher levels of review. And further, managers who traditionally dealt with the sponsorships are no longer the decision makers.

We decided to fallback on the visitors which we knew from earlier market surveys conducted in Europe, Malaysia and elsewhere that 98% of them who visited the zoo were interested in having enjoyable family outings. The majority of visitors' saw the zoo as an ideal place for family recreation. Regrettably only 2% of the visitors were interested in wildlife conservation.

Strategically, the year was started with the "Visit Zoo Negara Year" and launching of the "Zoo Negara Loyalty Cards" on 1st January 2009. This was followed by the launching of "Zoom Zoo Negara" by The Honourable Dato' Sri Azalina Dato' Othman Said, the Minister of MoTour on the 12th January. The Harvard Business Review observed that during the economic downturn the best strategy to adopt is to provoke the customers (Lay, et al, 2009). Zoo Negara decided to confront the year using the strategy of "Provocation-based Selling" as opposed to the normal "Product-based Selling". The underlying provocation-based selling is the idea that Zoo Negara should help the visitors to find money even when discretionary spending appears to have (at least temporarily) dried up.

Based on the historical annual record gate sales in 2009, I am proud to say that we have successfully strategized and charted an alternative solution for families to release their tensions and a much-needed breath of air during general economic turmoil. In other words, what we are telling the visitors' was; it is still much cheaper to patronize Zoo Negara as opposed to bringing the whole family for a tour outside Kuala Lumpur during the difficult time. This was provocation-based selling at its finest.

In order to entice the visitors further, Zoo Negara launched the largest Insect Zoo in Southeast Asian region on 27th June. We were honored to have at hand The Honourable Dato' Sri Sulaiman Abdul Rahman Abdul Taib, The Deputy Minister of MoTour to inaugurate the opening of the Insect Zoo. On display are 500 insects in the form of live and taxidermy specimens. Among the Malaysian species highlighted are some of the world's record breakers; (1) the world's largest moth, Atlas Moth (*Attacus atlas*) (2) the world's longest insect, Stick Insect (*Phobaeticus serratipes*) (3) the world's most beautiful butterfly, Rajah Brooke (*Troides brookiana*) (4) the world's largest cricket, Giant Bush Cricket (*Macrolyrastes imperator*) and many others.

We continue to educate the public and create awareness that Zoo Negara is committed to wildlife conservation. We take pride to state that the Malaysian Zoological Society is the only non-government organization (NGO) in Malaysia which operates a zoo that is actively involved in wildlife conservation release programme. 2009 witnessed, yet another milestone with the completion of the new breeding aviary for the Milky Stork (*Mycteria cinerea*). The wild population of Milky Stork in 2004 was estimated to be 10 or less birds (Li and Mundkur, 2004); and we are proud to report that Zoo Negara has bred 250 birds over 20 years.

During the year, 10 captive bred Milky Storks were released to a natural habitat, mostly mangrove swamps in Kuala Selangor and Kuala Gula, Perak, giving a total of 48 birds. Prior to their release, the Milky Storks were fitted with radio transmitters in order to monitor their whereabouts from the point of release. I would like to thank the Department of Wildlife and National Parks Peninsular Malaysia (DWNP) who has been our main collaboration partner; both monitoring and research work after the conservation release programmes are conducted jointly.

Zoo Negara conducted the Second International Amphibian Workshop on 19 – 22nd June. A three-day course covering advance ex-situ captive management and husbandry for amphibians, basic veterinary care and quarantine protocols was attended by 20 local and 10 international participants from Hong Kong, Singapore and Taiwan. I would like to thank Ron Gagliardo (Training Officer of the Amphibian Ark, Atlanta, USA) and Dr. Brad Wilson (Consultant herpetologist to San Diego Zoo, USA) who had both organized the course and guided the exciting nightly "frogging" around the zoo.

I would like to thank all the zoo's supporters; from those who have given 10 cents (in our 10 cents campaign) to those who have been our major donors and sponsors such as MoTour, NRE, Department of Irrigation and Drainage Malaysia (DID), National Hydraulic Research Institute Malaysia (NAHRIM), DWNP, Bank Kerjasama Rakyat Malaysia Berhad, Malayan Banking Berhad, Ambank Group, Exxon Mobil Malaysia Sdn. Bhd., ING Insurance Berhad, The Lion Group, Sungei Wang Plaza Sdn. Bhd., HSBC Bank Malaysia Berhad, Carlsberg Brewery Malaysia Berhad, Perbadanan Kemajuan Filem Nasional Malaysia (FINAS) and many others. For Malaysian Zoological Society, every contribution is important and all the donations helped the zoo to achieve its mission to be world class.

Again, I would like to make a special note here that the importance of the staff of Zoo Negara's involvement; for their loyal commitments, contributions and hard work, the success of the programmes and initiatives in 2009 would not have been possible.





FINANCE AND ADMINISTRATION

The income for 2009 increased to RM11.84 million as compared to RM11.24 million in 2008. This was the fifth year record increased on an annual basis. However, the total expenditure before depreciation concurrently increased from RM10.76 million to RM11.05 million in 2008 and 2009, respectively. The main increase in expenditure were due to salary increment, repairs due to the major storm damage on 24th June, particularly the fallen trees at the bird aviary, big cat exhibits and the removal of fallen trees.

The “10 Cents for My Zoo” campaign was launched on 27th July for the elephants’ new enclosure. As of 31st December, the total collection was RM29,700.00.

The Quality Management System (QMS) ISO 9001:2000 was upgraded to ISO 9001:2008 on 21st July after some changes in the Quality Manual. This year’s surveillance audit of ISO 9001:2008 was conducted by Pn. Mariam Binti Mohamad Zin, SIRIM Lead Auditor on 24th and 25th August. There were two Opportunities for Improvement (OFI’s) reported in the Hospital and Quality Manual documentation. Both of the OFI’s have been rectified according to the SIRIM’s QMS requirement.

Zoo Negara continued to be active in the provision of technical wildlife training to Malaysians who are involved in wildlife management. The Bird House team led by Ms. Doreen Khoo Say Kin, the Curator, conducted a practical training course on identification, handling and captive diet of hornbills to the Malaysian Nature Society (MNS) officers Ms. Ravinder Kaur, Ms. Teresa Ong and three orang asli on 6th October.

Dr. Muhammad Danial Felix Abdullah and his team, mainly from the Zoology Department conducted three “Animal Rescue and Captive Management” courses for 15 participants from Dewan Bandaraya Kuala Lumpur (DBKL) on 15th July and another 15 participants on 16th July. 12 participants from Jabatan Pertahanan Awam Malaysia (JPAM) were present on 5th November. The objectives of the course were to train the government rescue units on methods of capturing and restraining wild animals in public housing areas. Practical sessions with proper equipment and appropriate husbandry practices while in transit were also highlighted.

Zoo Negara played host for the second time to conduct the 10-day “Zoo Keeper Course” specially structured to equip new keepers on basic wild animal husbandry and bio-security, animal enrichment programmes, ethics and welfare of animals in captivity from 26th October to 4th November. Nightly discussions were held to assess trainees’ understanding of the lectures, practical sessions and assignments given. The course was offered to both the Malaysian Association of Zoological Parks and Aquaria (MAZPA) member institutions and non-MAZPA institutions.

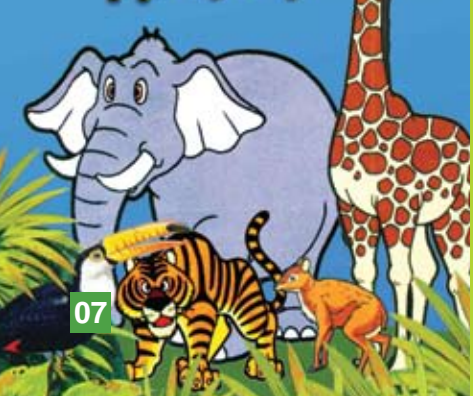


**ZOO NEGIARA
LOYALTY CARD**



- Age 3-12 yrs old
- Unlimited **FREE** entrance
- Minimum purchase of RM15 entitle to a **FREE** can drink at any of our kiosks
- **FREE** mystery gift

**REGISTER
NOW!**





PUBLIC AFFAIRS & MARKETING



This year was an exciting year for the department with the inclusion of high-profile events taking place especially with the launch of the Insect Zoo – the first of its kind in the country and the biggest in the region – is part of the zoo's efforts to achieve world-class status by 2015.

Linda Salim, the Head of Administration and her team were assigned to assist in planning of the 100-day events on every weekend and holiday to attract the visitors. The Information Technology team designed new paper bags, folders, notebooks, brochures, loyalty cards, bunting and banners. The tag line used in all the items was "Fun with Nature".

The department with KL HOP-ON HOP-OFF bus services jointly organized a programme to create public awareness on Tapir conservation in conjunction with "World Tapir Day". The HOP-ON HOP-OFF City Tour bus brought tourists from Kuala Lumpur City Centre to Zoo Negara to participate in various arts & crafts activities, educational interactive sessions at the Tapir Exhibit and other exhibits.

Zoo Negara is proud to be associated with wildlife conservation and biodiversity heavy hitter, National Geographic by hosting the launch for 'National Geographic TV1 Quiz'. The show which was first aired on Mondays at 7.00 pm - 8.00 pm until 26th April 2010 was aimed to inculcate awareness and love towards the conservation of animals.



SPONSORSHIP & DONATIONS

In terms of sponsorship and contributions, this year the department received RM395,663.00. The largest contributors ranging from industrial leaders such as Bank Kerjasama Rakyat Malaysia Berhad, Malayan Banking Berhad, Ambank Group, Exxon Mobil Malaysia Sdn. Bhd., ING Insurance Berhad, The Lion Group, Sungei Wang Plaza Sdn. Bhd., HSBC Bank Malaysia Berhad, Carlsberg Brewery Malaysia Berhad, FINAS and many others. Zoo Negara also received donations totaling RM32,273.00 with Park Royal Hotel Kuala Lumpur being the single largest donor.

The department also managed to add to the zoo's revenue by collaborating with several media related companies and production houses. Revenue amassed this year amounted to RM43,890.00 with no less than 15 media companies embarking on media projects in the zoo with positive signs of further improvement in media activities in the following year. Below is the comparison table in terms of revenue through media projects and filming production between 2008 and 2009.

	2008 RM	2009 RM
Filming & Videography	3,200.00	43,890.00
Sponsorship	652,370.00	319,500.00
Donation	58,309.00	32,273.00
TOTAL	713,879.00	395,663.00

Zoo Negara also received other sponsorships in kind surpassing the RM2 million mark. Two of the biggest were the upgrading of the frontage work at the Main Entrance and the Rainwater Harvesting System.

Sponsorship in Kind 2009

Aviary for Milky Stork	200,000.00
Upgrading the Frontage of Main Entrance	1,265,045.00
Rainwater Harvesting System	383,738.00
Animal Sculptures at the entrance of Parking A	198,800.00
Malaysia Wildlife Photographer of the Year	50,000.00

TOTAL 2,097,583.00

TOTAL SPONSORSHIP & DONATIONS 2,449,356.00





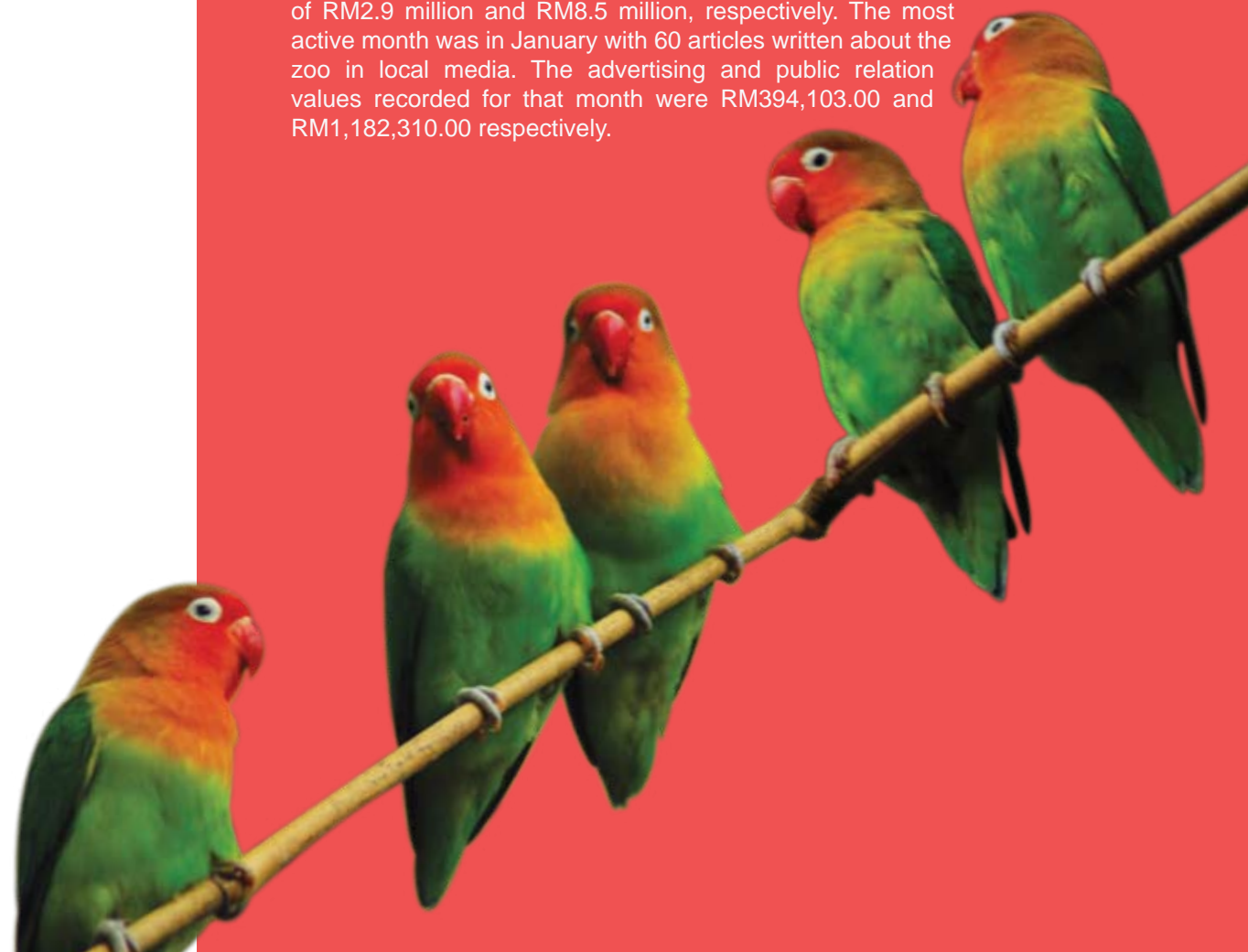
PUBLIC AFFAIRS & MARKETING

Many thanks to all our corporate friends, loyal sponsors and donors for their continuous support in our wildlife sponsorship and educational programmes. Special thanks also to the government agencies for their great support and sponsorship in kinds to make it another fruitful year.

MALAYSIA WILDLIFE PHOTOGRAPHER OF THE YEAR

The zoo wrapped 2009 with a grand gala dinner organized for the Malaysia Wildlife Photographer of the Year. The annual event which took place at the Palace of the Golden Horses, welcomed entrepreneurs, loyal sponsors and officials from DWNP, MoTour, FINAS and photographers. With no less than 10 awards which included the coveted Best Photo Award and Hutson Award, the glamorous fun-packed evening was accomplished with auctions, slide presentations and performances.

Zoo Negara had employed the services of MediaBanc (M) Sdn.Bhd to monitor its media coverage in September 2008. During the year, a total of 357 articles were published with the recorded advertising and public relation values of RM2.9 million and RM8.5 million, respectively. The most active month was in January with 60 articles written about the zoo in local media. The advertising and public relation values recorded for that month were RM394,103.00 and RM1,182,310.00 respectively.





CUSTOMER SERVICE



This year, the department had a very hectic year. It saw an increase of 83% in the number of events to 137 when compared to 75 events in 2008. Out of the 137 events held at Zoo Negara in 2009, there were a good number of corporate social responsibility events which comprised of 20 family days. Other events included 17 birthday parties, 13 charity events, nine zoo hunts, seven youth leadership, motivation activities and a wedding ceremony. Other popular activities held at the zoo are "Amazing Race" and fan club events.

The department also managed to generate revenue which complemented Zoo Negara's gate collection. The year's gross income for these was RM236,350.00, a growth of 23% compared to RM192,370.00 in 2008.

Special thanks to corporations and local industries that held their family days at Zoo Negara which included Petronas Gas Berhad, Petronas Carigali Sdn. Bhd., PJ Development Holding, Lion Club and Kumpulan Wang Simpanan Pekerja. The department would also like to express our thanks to government agencies such as Jabatan Kesihatan Sabak Bernam and Kementerian Kesihatan Malaysia, also banking sectors such as CIMB Bank Berhad and Bank Pembangunan Malaysia Berhad for their support towards Zoo Negara.





DEVELOPMENT & MAINTENANCE



The Development and Planning Committee (DPC) continued with its policy of improvement within the zoo during the year under review.

Development Projects :

NO	WORK COMPLETED BY 31 DECEMBER 2009	COST (RM)
1	Upgrading of the perimeter frontage of Zoo Negara by MPAJ sponsored by Ministry of Tourism Malaysia.	1,265,045
2	Upgrading of Main Entrance at Car Park A with animal sculptures sponsored by Ministry of Tourism Malaysia.	198,800
3	Construction of Rainwater Harvesting System sponsored by Department of Irrigation and Drainage.	383,738
4	Construction of Milky Stork Breeding Aviary sponsored by Ministry of Natural Resources and Environment.	200,000
5	Upgrading of slope and interlocking pavement at Banteng Enclosure to Savannah Walk.	142,638
6	Repair of roads around the Zoo.	81,640
7	Upgrading of Tiger and Lion Enclosures.	81,905
8	Construction of Painted Storks' viewing area.	47,092
9	Upgrading of Penguin House.	31,458
10	Upgrading of Pony Enclosure.	19,680
11	Upgrading of Nursery House.	12,144
12	Construction of river water inlet for river pumps.	29,492
13	Upgrading of Malayan Gaur night quarters.	16,987
14	Converting of Ankole Enclosure to accommodate Banteng and Ankole.	219,797
15	Upgrading of Mammal Kingdom Dome.	42,812
16	Upgrading of Emu Enclosure.	23,530
17	Construction of Deer Exhibit at Surau.	149,175
18	Repair of roof at Food Court Complex.	18,584
19	Upgrading of Director's Guest House roofing.	21,000

PROPOSED DEVELOPMENT PROJECTS

In addition to the work already carried out, a number of projects have been proposed by the various members of the Committee and zoo staff. The list below itemises those projects which are now under consideration for upgrading and new construction:

1. The electrical cabling and energy saving system.
2. The Bear Enclosure.
3. The Savannah Night Quarters.
4. Public toilet at the Bird House area.
5. Elephant Night Quarters.
6. Primate Islands.
7. The water piping system.





EDUCATION

The department had a remarkable year with the addition of three new staff members. We welcomed Ms. Edwina Lim Teen as our Education Executive in January followed by Ms. Liyana Amir as our Education Executive and Ms. Maznira Sylvia Azra Mansor as our Librarian in August. Their responsibilities included assisting with planning and execution of education programmes, worksheets, teaching tools, posters, publications, photography, organizing the Education Resource Centre that has been upgraded and to conduct our popular volunteer programme.

EDUCATION SERVICES

The department introduced eight new packages with a fun learning experience approach to raise awareness on wildlife and its surroundings. These packages offered various topics including 'Malaysian Endangered Journey', 'Meet the Giants', 'I Am A Zookeeper', 'I Am An Animal Trainer', 'I Am A Vet', 'Great Apes', 'Big Cats Trail' and 'Malaysian River Journey'. These educational outdoor programmes included guided tours, animal talks and interactive sessions with display materials, hands-on activities, art sessions and conservation messages. Our target groups were students ranging from pre-schools to institutions of higher learning. A total of 1,148 students participated in the activities.



EXHIBITIONS AND SPECIAL EVENTS

The department continued to work closely in organizing events inside (during festive seasons and special occasions) and outside the zoo at shopping centers for outreach programmes. Various series of road shows were held and mostly involved TESCO Hypermarkets, Jusco Hypermarkets, Giant Shopping Malls and Kuala Lumpur Central Market. During the programme, the education team introduced the educational packages as well as promoting Zoo Negara to the public. The department was also involved in organizing various events and workshops including 'World Tapir Day', 'Amphibian Husbandry Workshop', '6th MAZPA Field Training Course', 'Animal Captive & Management Course', 'Birdathon Competition', 'Malaysia Wildlife Photographer of the Year 2008' and 'Wirazone Customer Day'.

VOLUNTEERS

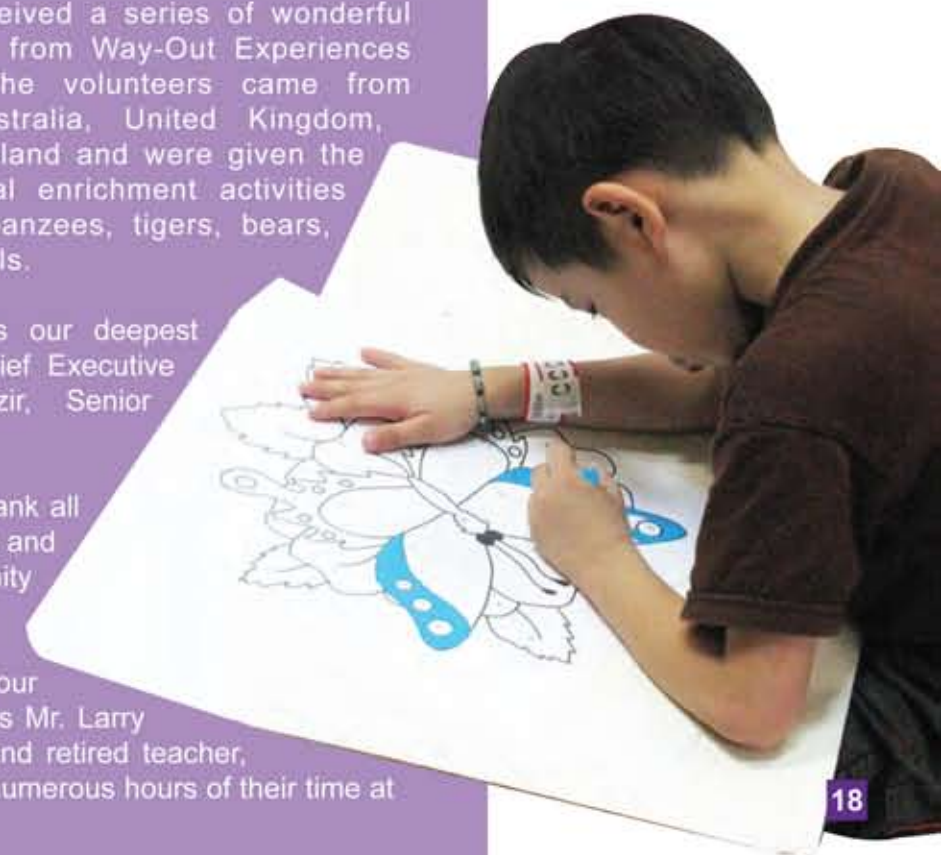
The department received 8,630 individuals, senior students and corporate agencies who contributed their time through social services as compared to 3,400 in the previous year.

The department continuously received a series of wonderful contributions from 48 volunteers from Way-Out Experiences Malaysia Sdn. Bhd. (WOX). The volunteers came from United States of America, Australia, United Kingdom, Germany, Denmark and New Zealand and were given the task of conducting environmental enrichment activities specifically to orangutans, chimpanzees, tigers, bears, elephants and other small mammals.

Zoo Negara would like to express our deepest appreciation to Ms. Fareea Ma, Chief Executive Officer and Mr. Mazrul Mahadzir, Senior Programme Facilitator of WOX.

The department also would like to thank all local institutions, universities, colleges and schools for their support in community services in aid of wildlife appreciation.

A special mention goes out to two of our most dedicated and helpful volunteers Mr. Larry Reiten, 68, from the United States and retired teacher, Ms. Patricia Zaharah, 73, who spent numerous hours of their time at the zoo.





EDUCATION

INDUSTRIAL TRAINING

The department provided internship opportunities for 110 trainees as compared to 55 students in the previous year from various institutions and colleges. The most popular fields of study were Tourism Management, Business Administration, Park & Amenities, Zoology, Biodiversity Conservation and Management, Landscape Management, Photography, Environmental Science, Marine Science, Biotechnology, Microbiology, Bioinformatics, Forestry, Mathematical Science (Statistics), Veterinary Medicine, Public Relations, Agrobiology, Psychology, Communication, Marketing and Finance.

The department would like to thank Universiti Putra Malaysia (UPM), International Islamic University of Malaysia (IIUM), Universiti Malaysia Terengganu (UMT), Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM), Universiti Teknologi MARA (UiTM), Universiti Malaysia Sarawak (UNIMAS), Universiti Malaysia Sabah (UMS), Universiti Malaya (UM), Universiti Industri Selangor (UNISEL), Universiti Tunku Abdul Rahman (UTAR), Universiti Tun Abdul Razak (UNITAR), University College Sedaya International (UCSI), Kolej Professional MARA, Kolej Komuniti Kuching, Taylor's College and Perbadanan Hal Ehwal Bekas Angkatan Tentera (PERHEBAT).

Zoo Negara is proud to have received three international trainees from University of Leeds United Kingdom, Royal Veterinary College United Kingdom and Oberlin College United States, respectively. This proved that Zoo Negara is internationally recognized as an industrial training facility.

RESEARCH AND DATA COLLECTION

A total of 251 students as compared to 35 students last year from universities and colleges registered under the research programme.

1. Behaviour & Activity Patterns of the Masked Palm Civet in Captivity.
2. Rhinoceros Hornbill's Behaviour.
3. Activities & Food Preferences of Orangutan in Captivity.
4. Sampling of Crows' Faecal Matter.
5. Freshwater Aquarium & Show Amphitheatre Pool Design.
6. Behaviour & Activity Patterns of Binturong (*Arctictis binturong*) in Captivity.

7. Legal Protection for Endangered Species: Malayan Tapir and Malayan Tiger.
8. Molecular Genotyping and Phylogenetic of the Barking Deer and Sun Bear.
9. Risk Management.
10. Behavioural Study of Silvered-leaf Monkey in Captivity.
11. Animal Photography – Portrait.
12. Occupational Safety and Health.
13. Bird Ecology.
14. Endangered Species at Zoo Negara: A Study on Malaysian Law.
15. Organizational Management, Performance & Development.
16. Water Conservation.

TRAINING, WORKSHOPS AND SEMINARS

Monthly seminars for staff, were conducted with the primary aim to improve knowledge about zoo management. The seminars were open to the public with a view to boost knowledge on wildlife, plant conservation and other related environmental issues.

Topics covered were “*The Importance of Plants in Life*”, “*Introduction to GPS*”, “*The Effect of Ecological Changes on Fish Population*”, “*Cleaner Air for Healthier Zoo*”, “*Electrical Safety*”, “*Amphibian Workshop*”, “*Photography Workshop*”, “*Influenza H1N1*”, “*Animal Rights, an Islamic Perspective*”, “*MAZPA Keeper Field Training Course*” and “*Customer Satisfaction & Hospitality*”. We would like to thank the speakers who gave their time for our seminars and workshops.

PUBLICATIONS

In October, the department launched “*Kancil Gazette*”, a monthly electronic newsletter on which are posted news item and details of activities during the month under review.

In the course of preparation, the department played a major role as editor for the publication of the Coffee Table Book entitled “*Malaysia Wildlife Photography of the Year*” to be launched at the Gala Night Dinner in honour of the winners.





PARK AND GARDENS

This year, the department continued with the tree and shrub planting programmes at specific locations.

Landscape Amenities

Shrubs and trees such as the “Yellow Turnera” (*Turnera ulmifolia*), “Cordyline” (*Cordyline fruticosa* ‘Firebrand’) and “Broad-leaved Fig” (*Ficus roxburghii*) were planted around the new Hari Harimau kiosk.



Hari Harimau Kiosk

“Rubra” (*Carphalea kirondron*) and the (*Loropetalum spp.*) were planted near the Rotunda building.



Rotunda

Additional species of shrub, Mother In-Law's Tongue (*Sansevieria trifasciata* ‘Laurenti’) were planted at Savannah Walk.



Savannah Walk

Plantings at the Food Court area near the Wild Restaurant were replaced by new species of Heliconia. Also, plantings of “Costus” and “Calathea” were made in the same area.

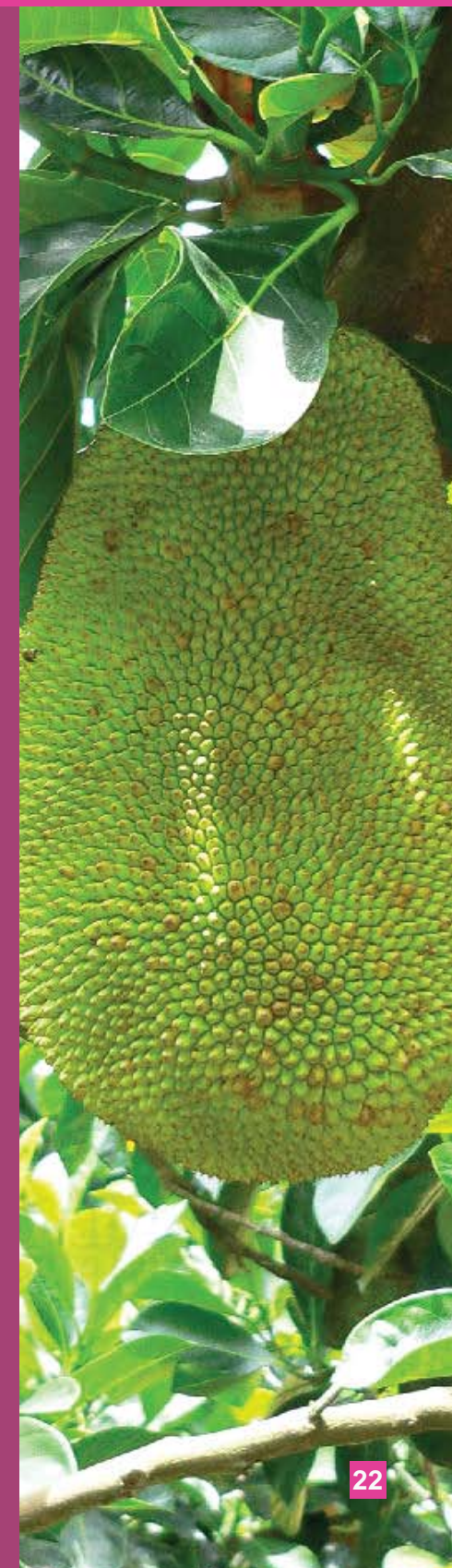


Food Court

Another location for Heliconia plantings was in the fish pond area.



Fish Pond





PARK AND GARDENS

Mammal Kingdom

Lanscaping work continued around the Porcupine Exhibit.



Porcupine Exhibit

Another location was the dome building.



Dome at Mammal Kingdom

Insect Zoo

Plantings at the Insect Zoo were replaced with *Heliconia* and *Costus* species and "*Iris*" (*Neomarica longifolia*).



Dome at Mammal Kingdom

Landscape activity continued at the Big Cats area.



Tiger Exhibit

Hornbill Centre

As a new exhibit, the Hornbill Centre required a considerable amount of landscaping work.



Hornbill Centre

A great deal of landscaping work was carried out during the year at the new deer exhibit constructed nearby Tunku Abdul Rahman Lake.



Deer Exhibit





ZOOLOGY



It was a very busy year for the department with several enclosures being refurbished and upgraded.

In order to improve our services to the public, continuous education and training were provided to the keepers and supervisors of the department to enhance their skills and knowledge.

A series of interactive programmes at 10 selected locations were carried out during the weekends and holidays in November to provide visitors with an enjoyable and informative day at the zoo by animal feeding experience under supervision of the keepers.

Enrichment programmes continued to be the main priority within the sections during the year to improve animal health and welfare.

BIRDS

The Bird House is home to 126 species with 1532 specimens. The team took part in many of the public awareness projects organized by the Education Department to promote conservation and educate the public on the diets, behavior and captive management.

Staff from the department participated in the Sabah Bird Festival in October and later in November. We also collaborated with the Malaysian Nature Society (MNS) Festival of Wings in Kuala Selangor Nature Park to further monitor on Conservation Release Programme of Milky Storks.

Breeding Programme

The department continued to breed endangered and indigenous species of Malaysia. The release of captive bred birds in the zoo into their "control" natural habitat managed by DWNP was the highlight of the year.

The list of birds bred during the year were Milky Storks (*Mycteria cinerea*), Argus Pheasant (*Argusianus argus*), Malayan Peacock Pheasant (*Polyplectron malacense*), Crestless Fireback Pheasant (*Lophura erythrophthalma*), Black Crowned Night Heron (*Nycticorax nycticorax*) and Common Peafowl (*Pavo cristatus*).

Other active breeders were Greater Flamingo (*Phoenicopterus ruber*), Pink Backed Pelican (*Pelecanus rufescens*) and African Spoonbill (*Platalea alba*). The Painted Stork (*Mycteria leucocephala*) still holds the title as the most prolific breeders. Another 200 chicks were recorded during the year, which brought the total to approximately 650 birds.

The department had managed to establish and modified a new Hornbill Centre using the cages formerly used for Lesser Apes. This Hornbill Centre comprised of eight cages to house eight pairs of hornbill species of the 10 known species in Malaysia.

The list of the hornbill species during the year were Rhinoceros Hornbill (*Buceros rhinoceros*), Greater Hornbill (*Buceros bicornis*), Wreathed Hornbill (*Aceros undulatus*), White-crested Hornbill (*Berenicornis comatus*), Wrinkled Hornbill (*Aceros corrugatus*), Bushy-crested Hornbill (*Anorrhinus galeritus*), Oriental Pied Hornbill (*Anthracoceros albirostris*) and Black Hornbill (*Anthracoceros malayanus*).

Conservation

A new Breeding Aviary sponsored by the DWNP was built to increase the number of Milky Stork (*Mycteria cinerea*) for a Conservation Release Programme. A total of 18 birds were successfully released to Matang Mangrove Forest Reserve in Kuala Gula, Perak. The bird sanctuary is the largest single mangrove forest in Peninsular Malaysia, established since 1970 by DWNP.

In the year of review, Zoo Negara embarked on a new collaborative research between Universiti Putra Malaysia (UPM), Ocean Research Institute, Tokyo University and DWNP. The objectives of this research were to monitor the flight patterns using bio-logs for captive and free-ranging Painted Storks (*Mycteria leucocephala*) at the zoo. This is an ongoing research.





ZOOLOGY

Exchange Programme

A series of breeding loans and exchange programmes were carried out with other domestic and international zoos during the year.

The list of breeding loans and exchange programmes were as the following:

Species	Number	Destination
Milky Stork (<i>Mycteria cinerea</i>)	2.2.0	Zlin Zoo, Czech Republic
Painted Stork (<i>Mycteria leucocephala</i>)	5.5.0	Zlin Zoo, Czech Republic
Malayan Peacock pheasants (<i>Polyplectron malacense</i>)	2.2.0	Singapore Zoological Garden, Singapore
Crestless Fireback Pheasants (<i>Lophura erythrophthalma</i>)	2.2.0	Singapore Zoological Garden, Singapore

MAMMALS

The section assisted the Zoo Veterinary Hospital with the “Animal Rescue and Captive Management” training sessions for DBKL in July, MAZPA participants in October and JPAM in November, on the correct ways of restraining animals without causing stress and injury to both animals and handlers.

The number of mammal species was 90 comprising of 525 specimens.

PRIMATES

The department took the first step towards our pledge for World Class Zoo by converting nine of the primates’ cages into the Hornbill Centre by November.

The resident primates were prearranged on breeding loan to approved facilities. A female Bornean Gibbon (*Hylobates muelleri*) was on breeding loan to Zoo Negeri Johor. In return, the department received one female Siamang (*Hylobates syndactylus*).

APE CENTRE

The Ape Centre is home to 1.3.0 Bornean Orangutans (*Pongo pygmaeus*), 2.4.0 Sumatran Orangutans (*Pongo abelii*) and 5.2.0 Chimpanzees (*Pan Troglodytes*).

Breeding Programme

Our Sumatran orang utan named Rokiah gave birth to a female on 17th February. She was separated from the group to allow her to care for her newborn.

On 11th June, a female chimpanzee named Tina from Taiping Zoo was introduced to the family group at the Ape Centre.

Exchange Programme

A male chimpanzee named Rambo was sent to Zoo Melaka as part of the exchange programme.

CARNIVORE & MAMMAL KINGDOM

Breeding Programme

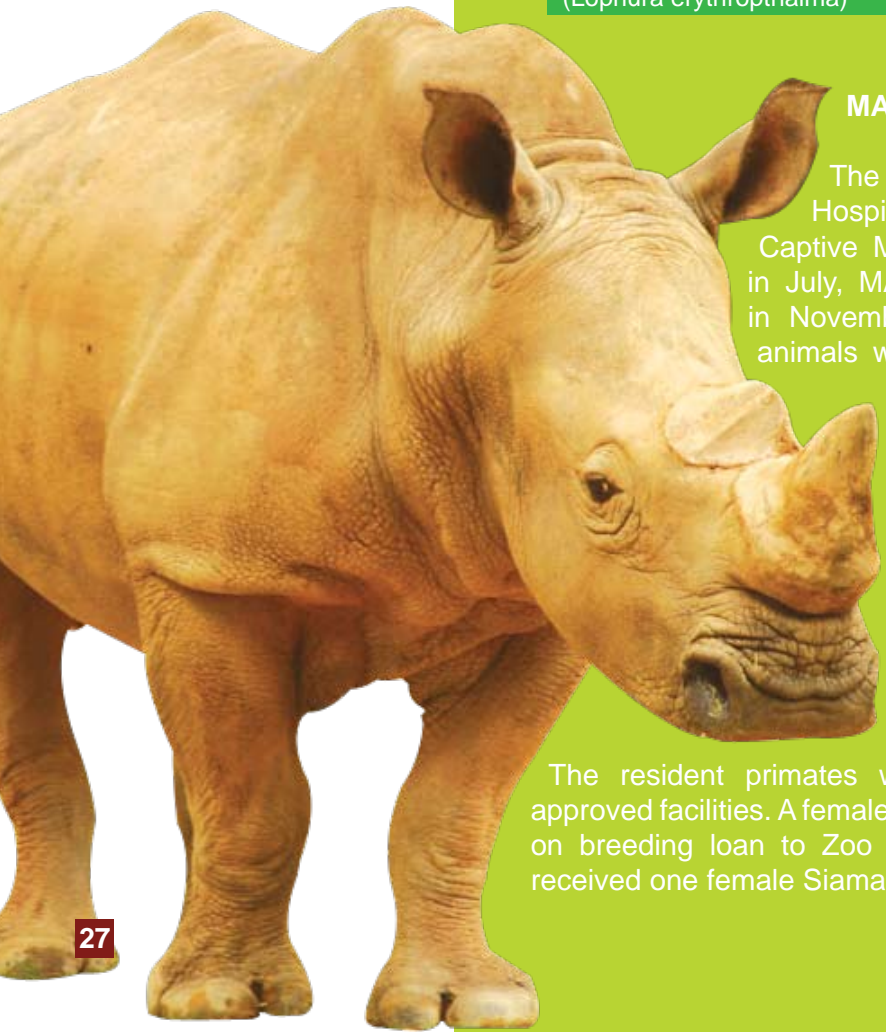
The Capybara (*Hydrochoerus hydrochaeris*), Striped Hyaena (*Hyaena hyaena*) and the Malayan Flying Fox (*Pteropus vampyrus*) gave birth during the year.

Exchange Programme

The section received a pair of baby Masked Palm Civets (*Paguma larvata*), one male Banded Linsang (*Prionodon linsang*) and three baby Common Palm Civets (*Paradoxurus hermaphroditus*) from Johor Zoo.

SAVANNAH / HOOF

The section had 64 animals comprising of Bantengs (*Bos javanicus*), Giraffes (*Giraffa camelopardalis*), Zebras (*Equus burchelli*), Nyalas (*Tragelaphus angasi*), Sable Antelopes (*Hippotragus niger*), Ankole Cattles (*Bos taurus*) and the various types of Deer species.





ZOOLOGY



Breeding Programme

A total of 39 births were recorded from Giraffes (*Giraffa camelopardalis*), Hippopotamuses (*Hippopotamus amphibius*), Zebra (*Equus burchelli*), Hog Deer (*Cervus porcinus*), Spotted Deer (*Axis axis*), Sambar Deer (*Cervus unicolor*), Lesser Mousedeer (*Tragulus javanicus*), Indian Gaur (*Bos gaurus*), Barking Deer (*Muntiacus muntjak*) and the Banteng (*Bos javanicus*).

Exchange Programme

The male Malayan Tapir (*Tapirus indicus*) from DWNP and the resident female were observed to be mating. Two male Nile Hippopotamuses (*Hippopotamus amphibius*) were sent to Johor Zoo.

Training Programme

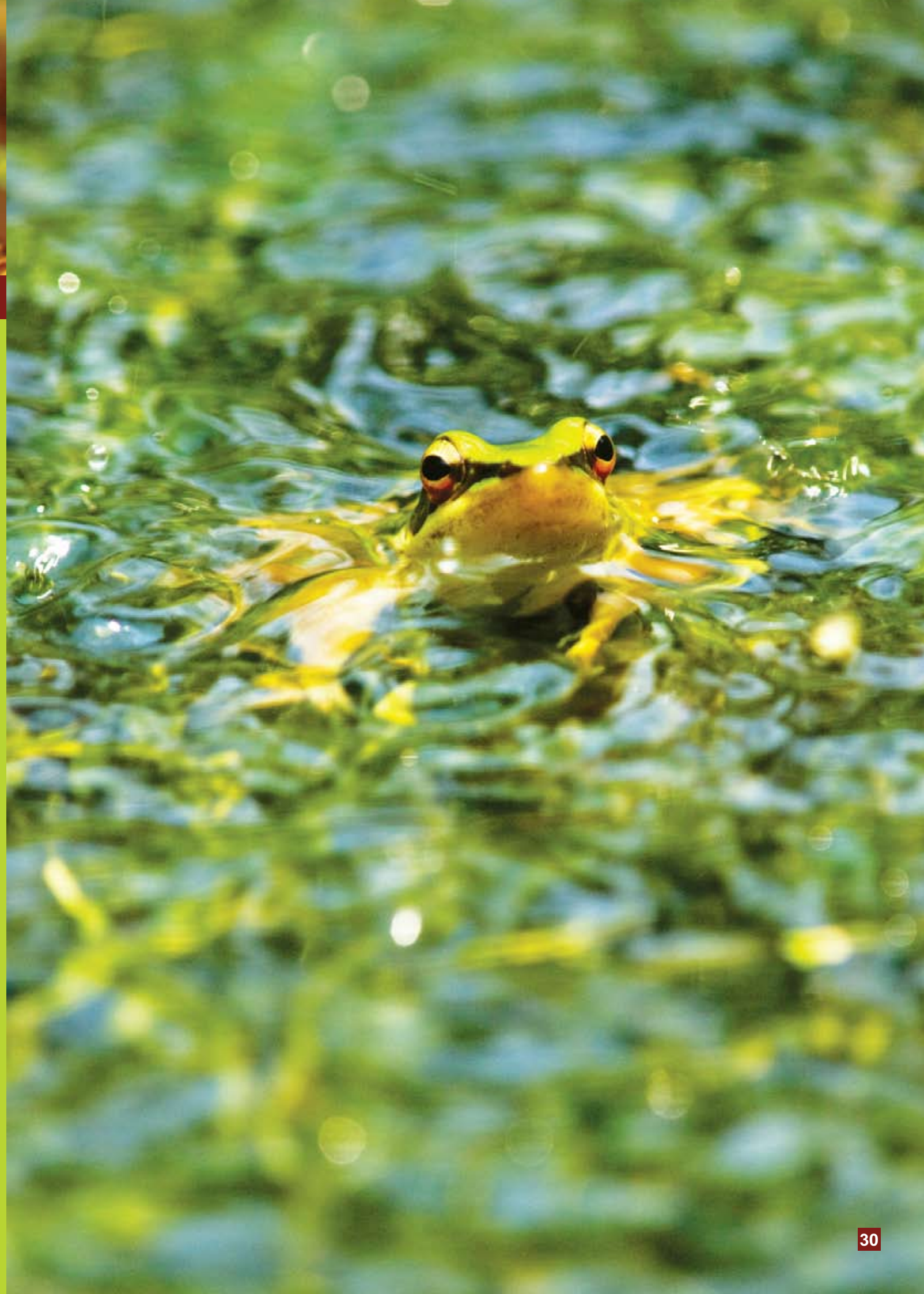
Three staff, Mr. Mohd. Hisham Ahmad, Mr. Mohd Effendi Radzuan and Mr. Mohamed Fitri Mohamed Yusoff were sent to Singapore Zoological Garden for elephant training in November.

REPTILE HOUSE AND AMPHIBIAN WORLD

The section houses 57 species and 236 specimens comprising snakes, lizards, crocodiles and turtles, while the Amphibian World has 22 species consisting of frogs and toads.

SHOW SECTION

Instead of having shows purely for entertainment, animal performances were tailored towards environmental conservation and education. Animals involved in the show included birds, fur seals and a sea lion. Animals were trained through positive reinforcement techniques for shows that display various natural behaviour.





HOSPITAL & VETERINARY SERVICES



The department saw a number of changes during the year as we welcomed two veterinarians, Dr. Sarah Chong Shu Chuin and Dr. Natrah Razak in July and August, respectively.

Zoo Negara now has four veterinarians at hand, to care for more than 5,000 residents of the zoo.

Animal Tranquilizations

During the year, 126 animals were tranquilized compared with 125 animal tranquilizations in 2008. These animals were tranquilized for various treatments and procedures including physical checkups and disease screening. Chemical restraint was utilized during the transfer of animals within sections or to other zoos. Physical restraint was limited to trained animals and smaller species via squeeze cages.

Animal Identification

Microchips were subcutaneously implanted in 63 animals during the year as a method of animal identification. To date, 240 animals had been implanted with microchips. This represented almost 25% of the total mammal species in the zoo.

Preventive Medicine

Preventive medicine is the backbone in any medical initiative, to aid in diagnostic and curative treatment. The following activities were conducted:

Vaccination

Over 50 animals were given yearly booster shots. The felids, viverrids and procyonids were vaccinated with Feline Rhinotracheitis-Calicivirus-Panleukopenia-Chlamydia psittaci vaccine. The hyaenids were vaccinated with Canine distemper-Adenovirus type 2-Parainfluenza-Parvovirus, *Leptospira canicola* and *icterohaemorrhagiae* vaccines.

Tuberculosis (TB) Testing

32 animals were randomly chosen for *Mycobacterium spp.* testing using the rapid test kits in comparison to eight animals in the previous year. All results were negative.

Leptospirosis

24 animals were tested for *Leptospira spp.* rapid test kit. In the previous year, eight animals were tested for *Leptospira spp.* All results were negative.

Hepatitis B Test

The Hepatitis B test was carried out on 18 animals with a rapid test kit. All results were negative.

Animal Mortality

In terms of mortality percentages, this year recorded a much lower incidence, compared with the two previous years.

Year	2007	2008	2009
Percentage	4.8	4.1	3.5





HOSPITAL & VETERINARY SERVICES

TREATMENT

Hospital

This year, 57 animals were treated in the Zoo Veterinary Hospital. Among the species involved were small and large cats, civets, reptiles, primates and a bear.

Field

As a standard practice in Zoo Negara, the treatment of large animals took place in the field, either in their exhibit areas or night quarters. Most were hoofed species and large carnivores. There were 92 cases, treated as outpatients in 2009.

Predator Control

The ongoing predator control programme is shown below; rats and crows remained the most prevalent.

PREDATOR YEAR	RATS	COMMON PALM CIVET	PETICULATED PYTHON	CROW	MACAQUE	DOMESTIC CAT
2008	435	5	3	2038	53	31
2009	342	2	12	380	17	26





TUNKU ABDUL RAHMAN AQUARIUM



Akuarium Tunku Abdul Rahman (ATAR), the oldest public aquaria in the country, is due to be re-launched in January 2010 with a new concept, the 'Malaysian River Journey- Mountain to the Sea'. This is the first wetland-based-aquaria that depicts Malaysian and South East Asian aquatic flora and fauna, along various river zones.

Tank preparation and landscaping

Tank landscape includes the use of various materials that go accordingly to the habitat/niche of that section of the river.

In addition to the landscaping of tanks, the team was also busy in landscaping the public area with artificial stones at various selected sections around the aquarium, mainly the upper river zone, mid river zone and the marine zone. An artificial mudflat to display various crab species was constructed at the mangrove zone. In addition to this, artificial trees have been erected to give a realistic feel as to walk in a real forest.

Landscaping of the marine zone started in the year with various tanks and designs inline with the theme.

River System Mural

The river system mural was completed before the South East Asian Zoos Association (SEAZA) Conference depicting almost life size scenes of habitats/niches that are found along the river. These paintings are along side the tanks that display aquatic flora and fauna of that river section.

Mini Display Tanks

Ten sets of mini tanks were erected, each with six small tanks. These tanks exhibit smaller fish and invertebrates (alive and preserved) and even various floristic exhibits such as fruit and leaves of selected trees or shrubs. A total of 60 new tanks have been completed. By the end of 2009, about 90% of these tanks were filled. Work on the balance 10% is under way.

Education Activities and Interactive Sessions

As part of the education effort at the aquarium, posters and display boards are placed at the aquarium. Among others, the educational posters touched on various topics such as man and wetlands, the history of ATAR and a marine poster display of large marine animals.

The aquarium was one of the first sections in the zoo to be actively involved with this interactive session with visitors. The interactive sessions which began in July, were conducted during weekends and public holidays. The response has been very encouraging as visitors found it very helpful especially in understanding the new aquarium concept.





DONOR & SPONSORS

LIST OF SPONSORSHIP / DONATION 2009

TOTAL SPONSORSHIPS / DONATIONS RM 10,000 AND ABOVE

NAME OF SPONSORS	ANIMAL / ITEM SPONSORED	RM
BANK KERJASAMA RAKYAT MALAYSIA BERHAD	BIRDS AND TRAM HUT	45,150.00
MALAYAN BANKING BERHAD	TIGER	40,000.00
AMBank GROUP	DROMEDARY CAMELS	40,000.00
EXXON MOBIL MALAYSIA SDN BHD	TIGERS	40,000.00
ING INSURANCE BERHAD	AFRICAN LION	25,000.00
	GIR LION ENRICHMENT	10,000.00
THE LION GROUP	AFRICAN LION	21,000.00
SUNGEI WANG PLAZA SDN. BHD	MINIATURE HORSE AND ZEBRA	20,000.00
HSBC BANK MALAYSIA BERHAD	TIGER	20,000.00
CARLSBERG BREWERY MALAYSIA BERHAD	ELEPHANTS	15,000.00
PERBADANAN KEMAJUAN FILEM NASIONAL MALAYSIA	WILDLIFE CONSERVATION	10,000.00

TOTAL SPONSORSHIPS / DONATIONS RM 10,000 AND ABOVE286,150.00

SPONSORSHIP / DONATION BELOW RM 10,00065,623.00

SPONSORSHIP IN KINDS

MINISTRY OF TOURISM	UPGRADING THE FRONTAGE OF MAIN ENTRANCE	1,265,045.00
DEPARTMENT OF IRRIGATION AND DRAINAGE	RAINWATER HARVESTING SYSTEM	383,738.00
DEPARTMENT OF WILDLIFE AND NATIONAL PARKS	MILKY STORK	200,000.00
MINISTRY OF TOURISM	UPGRADING PARKING A ENTRANCE WITH ANIMAL SCULPTURES	198,800.00
MINISTRY OF TOURISM	PHOTOGRAPHER OF THE YEAR 2009	50,000.00

TOTAL SPONSORSHIP IN KINDS2,097,583.00

TOTAL SPONSORSHIPS & DONATIONS2,449,356.00

OTHERS - TV SHOOTING ETC43,890.00

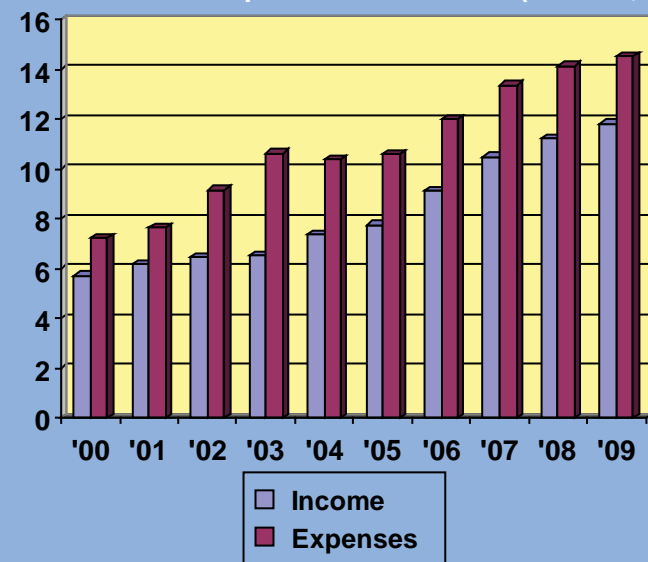
STAFF LIST

STAFF LIST AS AT 31ST DECEMBER 2009											
Director	Dr.Mohamad Bin Ngah Ph.D.										
ADMINISTRATION & HUMAN RESOURCE											
Head of Administration	Linda Binti Salim										
Head of Human Resource	Mohd Husny Bin Mustaffa										
Human Resource Officer	Hasnold Hisyam Bin Adenan										
Administrative Executive	Noor Syuhadah Binti Mokhtar										
ISO 9001 Executive	Badro Hisham Bin Othman										
Event Coordinator	Sri Murugan A/L Kupan (Until 04/06/2009)					Wan Suhana Binti Wan Mohd Noor (Until 09/07/2009)					
Officer	Azrul Sa'adin										
Driver	Ali Bin Mohd Som					Suhaimi Bin Jamaluddin			Sezali Bin Abdul Aziz		
Despatch	Abdul Rahman Bin Mohamad Isam (Until10/02/2009)					Mohd Azrol Bin Azhar					
INFORMATION TECHNOLOGY											
Senior Executive	Aslifatihah Binti Ahmad										
Officer	Wan Muhamad Fariq Bin Wan Maamor										
Graphic Designer	Fhadirul Hazriq Bin Ishak										
FINANCE											
Finance Manager	Ngiam Yiow Woon (Until 22/02/2009)										
Finance Senior Executive	Zahri Bin Ibrahim										
Finance Officer	Mariana Binti Muhammad (Until 30/09/2009)										
Assistant Supervisor	Mariyah Binti Kadir										
Ticket Seller	Asmida Binti Abu Samah	Halimah Binti Abi	Siti Zainab Binti Mat Nawi	Mesahah Alimen	Kuyong Anak Jilin	Maheran Binti Muhammad	Hasnida Binti Hasan Nudin				
PUBLIC RELATION & MARKETING											
Head of Department	Mary Tan Ah Ta										
Assistant Head	Shahnaz Binti Md Said (Until 11/07/2009)										
Public Relation Executive	Subashni A/P Bashu (Until 18/03/2009)					Siti Zulaikha Binti Mohd Zahid (Until 12/07/2009)					
Officer	Suraya Binti Md Nasir (Until 29/12/2009)					Tayalan A/L Raman (Until 09/03/2009)					
Assistant Officer	Norhazwani Binti Abd Halim					Hadzia Binti Abu Hasan			Azliza Binti Jaini (Until 17/08/2009)		
Ticker Checker	Chen Nyet Moy					Nor Shafrina Binti Ismail (Until 26/01/2009)			Nur Athirah Binti Abdul Aziz (Until 09/03/2009)		
	Arleyudistraishaq Bin Arifin Fadli (Until 30/07/2009)					Nor Hayati Binti Abdullah			Dahrul Nizad Bin Salih		
	Mohammad Haikal Acken Bin Pajah					Azha'ar Bin Azizan					
EDUCATION											
Senior Executive	Junaldi Bin Omar										
Executive	Edwina Lim Teen					Liyana Binti Amir					
Officer	Maznira Sylvia Azra Binti Mansor										
HOSPITAL & VETERINARIAN SERVICES											
Head of Department	Dr. Mat Naim Bin Hj. Ramli										
Assistant Head	Dr. Muhammad Danial Felix Bin Abdullah					Dr.Chong Shu Chuin, Sarah			Dr. Natrah Binti Abd Razak (Until 26/09/2009)		
Lab Executive	Mohammad Khairul Na'im Bin Norzahidi										
Lab Officer	Muzaffar Bin Mosquill (Until 19/12/2009)										
Senior Keeper	Sukor Bin Mohammad										
RESEARCH & DEVELOPMENT											
Training Coordinator	Nazafar Bin Idris										
HORTICULTURE											
Supervisor	Muhammad Bin Ismail										
MAINTENANCE & DEVELOPMENT											
Executive	Shahril Bin Shariff										
Supervisor	Ahmad Bin Noor. Mohammed										
Senior Handyman	Ishak Bin Salim					Mohamad Salihin Bin Senawi					
Handyman	Kamarul Amirudin Bin Kamaruzaman			Ridwan Fitri Bin Ishak		Nor Fazli Bin Md Khamisar		Mohd Sahere Bin Saliman		Mohammad Arif Bin Ibrahim	
ZOOLOGY											
Curator	Doreen Khoo Say Kin										
Assistant Curator	Herman Bernard Ganapathy										
Executive	Norfaraziana Binti Minhat										
Officer	Ricky Akbar Atep Tee Yee Hong (Until 31/12/2009)										
Senior Supervisor	Jamsari Bin Mohamad										
Senior Animal Trainer	Mohd Yusof Bin Musa					Mahat Bin Mohamed		Che Hassan Bin Che Man			
Supervisors	Amirul Siva Bin Abdullah					Ishak Bin Bakar		Musa Bin Awang		Wahid Bin Jantan	
	Aminuddin Bin Hashim					Mohd Nasir Bin Sadan		Mat Iza Bin Ariffin			
Assistant Supervisors	Mohd Hisham Bin Ahmad					Ahmad Nizam Bin Zainuddin		Mohd Hamdan Bin Abdul Hamid			
	Mohd Noor Bin Mohammed Che An					Abdul Rahman Bin Othman		Christopher Caine Xavier		Zainul Abidin Bin Yahya	
Animal Trainer	Ganesan A/L Ramachandran					Mafrat Bin Kerinting (Until 19/11/2009)		Masilamony A/L Sinnapan		Sukor Bin Mohamed	
Senior Keepers	Paniselon A/L Manikam					Pathamanathan A/L Jayaram		Ramlée Bin Ismail		Parwaiz Bin Abdul Sattar	
	Akmal Hadi Bin Samsuddin					Sharif Bin Iberahim		Ahmad Sirajuddin Bin Md Alias		Mohamed Fitri Bin Mohamed Yussoff	
	Mohd Hafiz Thanabalan					Hamdan Bin Hamid					
	Mohd Hamzah Bin Mohatar @Mokhtar					Abdul Rahim Bin Ayub					
Keepers	Mohd Fareed Bin Mohd Dzulkifli (Until 14/04/2009)							Che Yaakob Bin Che Harun		Haidrol Azmi Bin Ahmad	
	Gunasegar A/L Letchumanan					Edie Azwar Bin Abdullah		Azrennizam Bin Ibrahim		John Anak Dana	
	Habib Bin Md Ali (Until 31/07/2009)					Mohamad Zul Bin Mohd Subramaniam (Until 24/04/2009)		Mark Igang Anak Igang Anyi		Mohamad Azman Bin Abdul Aziz	
	Hazlie Bin Zainurdin					Mohd Helmi Bin Abdullah		Muhammad Fakarudin Bin Md Daud		Mohd Effendi Bin Radzuan	
	Mohd Nizar Bin Kamarudin					Noor Fhadillatul Ahya Maulad Abd Latif		Mohd Idham Bin Muhamad Yusof		Maran a/l Rengasamy	
	Mohd Khairul Azhar Bin Mohd Nasir					Amir Akmal Bin Azhari (Until 01/03/2009)		Zul Haqimi Bin Sohaimi		Mohamad Benyamin Bin Alias (31/03/2009)	
General Worker	Mohd Yusrizan Bin Yahya					Mohd Azfar Zulfadli Bin Abdul Aziz (Until 31/05/2009)				Nicklaus Biat Anak Unsanggi (Until 01/02/2009)	
	Nur Haizat Bin Ishak (Until 31/12/2009)					Firdaus Bin Muhammad Yahaya Luddin		Muhammad Syafiq Bin Razman (24/05/2009)		Ravi Kumar A/L Gopal	
	Muhammad Faizal Bin Rame					Abdul Halim Bin Johari		Mohd Shahruilizam Bin Ramli		Shawal Bin Mohammad	
	Mohamad Noor Azman Endam Bin Abdullah					Nur Shahidin Bin Ishak		Mohammad Adzha Bin Ismail		Baharin Bin Zakaria	
	Alias Bin Ismail					Mohd Firdaus Bin Abd Samad		Mohd Firdaus Bin Mat Said		Mohamad Syafiq Bin Abdullah	

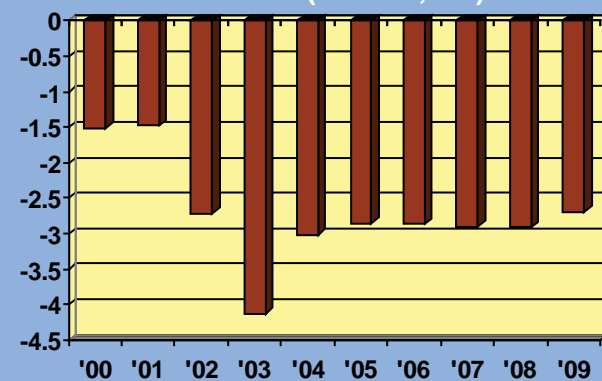


STATISTICAL ANALYSIS

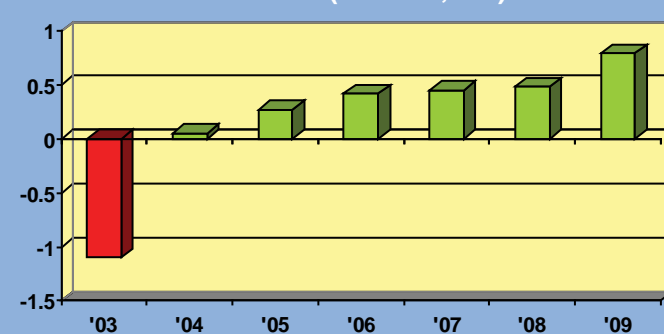
Annual Income / Expenses 2000 - 2009 (RM 000,000)



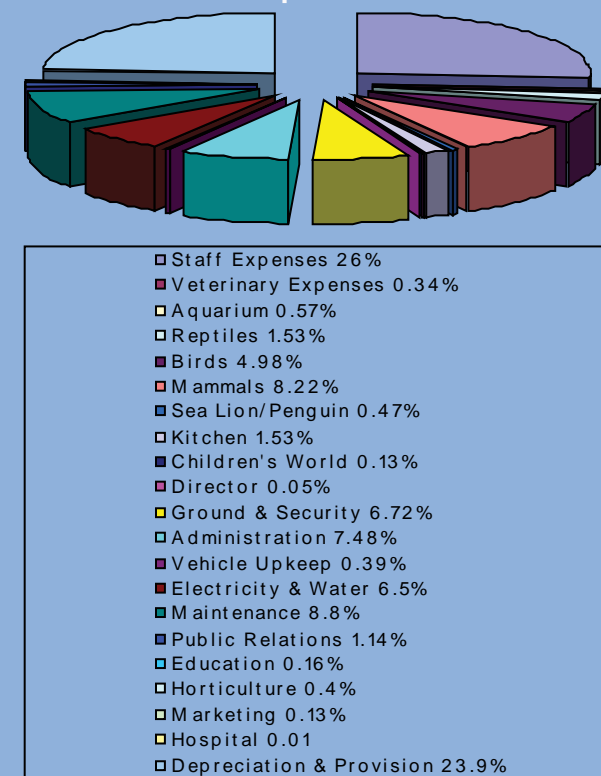
Annual Surplus / Deficit On Operation After Depreciation 2000 - 2009 (RM 000,000)



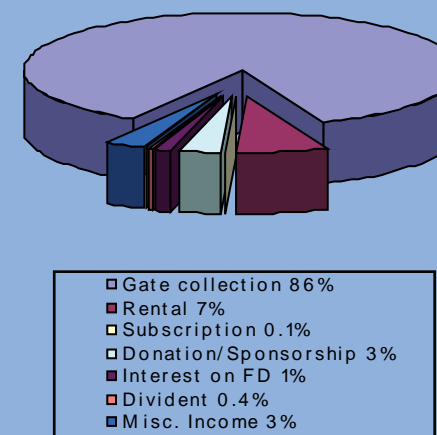
Annual Surplus / Deficit On Operation Before Depreciation 2003 - 2009 (RM 000,000)



Annual Expenses 2009



Annual Income 2009





ANIMAL INVENTORY

CENSUS

2009 CENSUS

CLASS	SPECIES	SPECIMEN
Mammals	90	525
Birds	126	1532
Reptiles	57	236
Fish	181	3039
Amphibian	22	114
Total	476	5446

2008 CENSUS

CLASS	SPECIES	SPECIMEN
Mammals	93	548
Birds	127	1492
Reptiles	58	247
Fish	182	3044
Amphibian	22	106
Total	482	5437

2007 CENSUS

CLASS	SPECIES	SPECIMEN
Mammals	94	565
Birds	127	1342
Reptiles	62	292
Fish	177	3075
Amphibian	18	87
Total	478	5361

MAMMALS

MARSUPIALIA		
<i>Macropodidae</i>		
Grey Kangaroo	<i>Macropus giganteus</i>	1.0.0
Agile Wallaby	<i>Macropus agilis</i>	2.3.3
Red-Legged Pademelon	<i>Thylogale stigmatica</i>	7.3.4
Sugar gliders	<i>Petaurus breviceps</i>	2.3.2
CHIROPTERA		
<i>Pteropodidae</i>		
Malayan Flying Fox	<i>Pteropus vampyrus</i>	4.8.1
PRIMATES		
<i>Ceboidae</i>		
Brown Capuchin Monkey	<i>Cebus apella</i>	2.0.0
<i>Lorisdidae</i>		
Slow Loris	<i>Nycticebus coucang</i>	4.1.1
<i>Cercopithecus</i>		
Blue Monkey	<i>Cercopithecus mitis</i>	0.1.0
Vervet Monkey	<i>Chlorocebus pygerythrus</i>	1.1.0
Stump-Tailed Macaque	<i>Macaca arctoides</i>	1.4.0
Pig-Tailed Macaque	<i>Macaca nemestrina</i>	1.0.0
Bonnet Macaque	<i>Macaca radiata</i>	3.3.3
Long-Tailed Macaque	<i>Macaca fascicularis</i>	1.5.0
Rhesus Macaque	<i>Macaca mulatta</i>	0.1.0
Lion-Tailed Macaque	<i>Macaca silenus</i>	1.0.0
Anubis/Olive Baboon	<i>Papio anubis</i>	6.2.1
Common/Entellus Langur	<i>Presbytis entellus</i>	0.1.0
<i>Pongidae</i>		
White Handed/Lar Gibbon	<i>Hylobates lar</i>	4.4.1
Siamang	<i>Hylobates syndactylus</i>	2.1.0
Bornean Orangutan	<i>Pongo pygmaeus</i>	1.3.0
Sumatran Orangutan	<i>Pongo abelii</i>	2.5.0
Chimpanzee	<i>Pan troglodytes</i>	5.2.0
LAGOMORPHA		
<i>Leporidae</i>		
Old World Rabbit		2.2.1
RODENTIA		
<i>Sciuridae</i>		
Prevost Squirrel	<i>Callosciurus prevosti</i>	4.3.0
Cream-coloured Giant Squirrel	<i>Ratufa affinis</i>	1.1.0
Black Tailed Prairie Dog	<i>Cynomys ludovicianus</i>	0.0.1
Bamboo rat	<i>Rhizomyini sumatrensis</i>	0.0.1
<i>Hystricidae</i>		
Malayan Porcupine	<i>Hystrix brachyura</i>	8.4.2
<i>Caviidae</i>		
Guinea Pig	<i>Cavia porcellus</i>	0.0.17
<i>Erinaceomorpha</i>		
Hedgehog	<i>Erinaceus europaeus</i>	0.1.3
<i>Hyrochaeridae</i>		
Capybara	<i>Hydrochoerus hydrochaeris</i>	1.2.3
CARNIVORA		
<i>Canidae</i>		
Asiatic Wild Dog/Dhole	<i>Cuan alpinus</i>	1.1.0
<i>Ursidae</i>		
Malayan Sun Bear	<i>Helarctos malayanus</i>	2.6.0
Asiatic Black Bear	<i>Ursus thibetanus</i>	1.1.0
Brown Bear	<i>Ursus arctos</i>	1.2.0
<i>Procyonidae</i>		
Raccoon	<i>Procyon lotor</i>	3.0.0
<i>Mustelidae</i>		
Ferret	<i>Mustela putorius furo</i>	1.1.0
Small-Clawed Otter	<i>Aonyx cinerea</i>	9.1.2
<i>Hyaenidae</i>		
Striped Hyaena	<i>Hyaena hyaena</i>	3.3.1
<i>Herpestidae</i>		
Mongoose	<i>Herpestes javanicus</i>	1.0.0

<i>Viverridae</i>		
Binturong	<i>Arctictis binturong</i>	3.4.1
Small-Toothed Palm Civet	<i>Arctogalidia trivirgata</i>	1.0.0
Common Palm Civet	<i>Paradoxurus hermaphroditus</i>	1.2.3
Masked Palm Civet	<i>Paguma larvata</i>	2.2.0
Malay civet	<i>Viverra zangalla</i>	1.1.0
Banded civet	<i>Hemigalus derbyanus</i>	1.0.0
<i>Felidae</i>		
Leopard Cat	<i>Prionailurus bengalensis</i>	3.4.1
Flat-Headed Cat	<i>Prionailurus planiceps</i>	1.0.0
African Lion	<i>Panthera leo</i>	1.2.0
Gir Lion	<i>Panthera leo persica</i>	1.1.0
Leopard (Spotted)	<i>Panthera pardus</i>	0.1.0
Leopard (Black)	<i>Panthera pardus</i>	1.1.0
Indochinese/Malayan Tiger	<i>Panthera tigris jacksoni</i>	1.2.0
Sumatran Tiger	<i>Panthera tigris (sumatrae)</i>	1.0.0
Bengal Tiger	<i>Panthera tigris (tigris)</i>	1.0.0
Puma	<i>Profelis concolor</i>	2.2.0
PINNIPEDIA		
<i>Otariidae</i>		
Californian Sealion	<i>Zalophus californianus</i>	1.0.0
Cape Fur Seal	<i>Arctocephalus pusillus</i>	1.2.0
PROBOSCIDEA		
<i>Elephantidae</i>		
Malayan Elephant	<i>Elephas maximus hirsutus</i>	1.2.0
<i>Tapiridae</i>		
Malayan Tapir	<i>Tapirus indicus</i>	2.1.0
PERISSODACTYLA		
<i>Equidae</i>		
Common Zebra	<i>Equus burchelli</i>	3.5.0
Horse (miniature)	<i>Equus caballus</i>	2.0.0
<i>Rhinocerotidae</i>		
White Rhinoceros		1.2.0
ARTIODACTYLA		
<i>Ceratotherium simum</i>		
<i>Suidae</i>		
Bearded Pigs	<i>Sus barbatus</i>	2.2.0
<i>Hippopotamidae</i>		
Pygmy hippo	<i>Hexaprotodon liberiensis</i>	1.0.0
Nile Hippo	<i>Hippopotamus amphibius</i>	2.3.0
<i>Camelidae</i>		
Arabian Camel/Dromedary	<i>Camelus dromedarius</i>	2.2.0
Guanaco	<i>Lama guanico</i>	1.0.0
<i>Tragulidae</i>		
Lesser Mousedeer	<i>Tragulus javanicus</i>	1.1.1
Greater Mousedeer	<i>Tragulus napu</i>	1.0.0
<i>Cervidae</i>		
Axis/Spotted Deer	<i>Axis axis</i>	15.15.19
Hog Deer	<i>Axis porcinus</i>	6.13.3
Javan Deer	<i>Cervus timorensis</i>	3.8.2
Sambar Deer	<i>Cervus unicolor equinus</i>	7.10.1
Barking Deer/Muntjak	<i>Muntiacus muntjak pelharicus</i>	1.8.0
<i>Giraffidae</i>		
Giraffe	<i>Giraffa camelopardalis</i>	5.9.0
Red Lechwe	<i>Kobus leche leche</i>	2.1.1
Sable Antelope	<i>Hippotragus niger</i>	6.5.0
<i>Bovidae</i>		
Ankole Cattle	<i>Bos taurus</i>	4.4.0
Malayan Gaur	<i>Bos gaurus hubbacki</i>	1.2.0
Indian Gaur	<i>Bos gaurus</i>	10.2.1
Lowland Anoa	<i>Bubalus depressicornis</i>	1.1.0
Banteng	<i>Bos javanicus</i>	20.7.0
Scimitar-Horned Onyx	<i>Onyx dammah</i>	0.2.0
Onyx X Gemsbok	<i>Onyx hybrid</i>	1.0.0
Nyala	<i>Tragelaphus angasi</i>	0.1.0
Goat	<i>Capra hircus</i>	8.8.0
Kirk's Dik - dik	<i>Madoqua kirkii</i>	2.0.0
Friesian cattle	<i>Bos taurus</i>	1.1.0



CENSUS

BIRD

STRUTHIONIFORMES

<i>Struthionidae</i>		
Ostrich	<i>Struthio camelus</i>	2.4.0

CASUARIIFORMES

<i>Dromaiidae</i>		
Emu	<i>Dromaius novaehollandiae</i>	5.5.10
Double-Wattled Cassowary	<i>Casuarius casuarius</i>	0.0.1

SPHENISCIFORMES

<i>Spheniscus</i>		
Humboldt Penguin	<i>Spheniscus humboldti</i>	2.0.0

PELECANIFORMES

<i>Pelencanidae</i>		
Eastern White Pelican	<i>Pelecanus onocrotalus</i>	2.0.0
Pink-Backed Pelican	<i>Pelecanus rufescens</i>	13.18.8

CICONIIFORMES

<i>Phalacrocoracidae</i>		
Great Cormorant	<i>Phalacrocorax carbo</i>	0.1.0
<i>Ardea</i>		
Little Green Heron	<i>Butorides virescens</i>	2.2.2
Black Crowned Night Heron	<i>Nycticorax nycticorax</i>	20.20.48
Cattle Egret	<i>Bubulcus ibis</i>	1.1.2
<i>Ciconiidae</i>		
Storm Stork	<i>Ciconia stormi</i>	0.1.1
Marabou Stork	<i>Leptoptilos crumeniferus</i>	0.0.1
Milky Stork	<i>Mycteria cinerea</i>	12.12.36
Painted Stork	<i>Mycteria leucocephala</i>	50.50.558
Milky x Painted Stork	<i>M. cinerea</i> x <i>M. leucocephala</i>	0.0.8
Black-Neck Stork	<i>Ephippiorhynchus asiaticus</i>	1.1.0

<i>Threskiornithidae</i>		
Black -Headed Ibis	<i>Threskiornis melanocephalus</i>	5.4.0
African Spoonbill	<i>Platalea alba</i>	2.2.2
Greater Flamingo	<i>Phoenicopterus ruber</i>	24.20.25
Caribbean Flamingo	<i>Phoenicopterus ruber ruber</i>	0.0.23

ANSERIFORMES

<i>Anatidae</i>		
Black Swan	<i>Cygnus atratus</i>	1.1.0
Mandarin Duck	<i>Aix galericulata</i>	2.1.0
Mute Swan	<i>Cygnus olor</i>	2.0.0

FALCONIFORMES

<i>Accipitridae</i>		
White-Bellied Sea Eagle	<i>Haliaeetus leucogaster</i>	1.1.0
Brahminy Kite	<i>Haliastur indus</i>	0.0.7
Black Kite	<i>Milvus migrans</i>	0.0.1
Crested Serpent Eagle	<i>Spilornis cheela</i>	0.0.1
Blyth's Hawk Eagle	<i>Spizaeus alboniger</i>	0.0.1

GALLIFORMES

<i>Cracidae</i>		
Greater Currasow	<i>Crax rubra</i>	1.1.0
<i>Phasianidae</i>		
Chukar	<i>Alectoris chukar</i>	2.2.0
Blue-Breasted Quail	<i>Coturnix chinensis</i>	0.0.1
Great Argus	<i>Argusianus argus</i>	6.6.4
Golden Pheasant	<i>Chrysolophus pictus</i>	4.5.0
Serama	<i>Gallus gallus (Bantam)</i>	4.3.10
Red Jungle Fowl	<i>Gallus gallus</i>	3.3.0
Green Jungle Fowl	<i>Gallus varius</i>	2.1.0
Crestless Fireback	<i>Lophura erythrophthalma</i>	13.13.4
Crested fireback	<i>Lophura ignita ignita</i>	5.2.0
Silver Pheasant	<i>Lophura nycthemera</i>	6.5.0
Common Peafowl	<i>Pavo cristatus</i>	8.12.12
Mountain/Rothschild's Peacock Pheasant	<i>Polyplectron inopinatum</i>	6.1.0
Malayan Peacock Pheasant	<i>Polyplectron malacense</i>	9.9.3
Crested Guineafowl	<i>Guttera pucherani</i>	0.0.1
Green Peafowl	<i>Pavo muticus</i>	2.1.0

Helmeted Guineafowl	<i>Numida meleagris</i>	0.0.2
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GRUIFORMES

<i>Rallidae</i>		
White-Breasted Water Hen	<i>Amauromis phoenicurus</i>	0.1.1

COLUMBIFORMES

<i>Columbidae</i>		
Nicobar Pigeon	<i>Caloenas nicobarica</i>	5.4.1
Emerald/Green-Winged Dove	<i>Chalcophaps indica</i>	4.2.0
JavaneseTurtle/Collared Dove	<i>Streptopelia bitorquata</i>	0.0.2
Spotted(Necked) Dove	<i>Streptopelia chinensis</i>	0.0.2
Rock Dove	<i>Columba livia</i>	0.0.67
Green Imperial Pigeon	<i>Ducula aenea</i>	0.0.6
Pied Imperial Pigeon	<i>Ducula bicolor</i>	1.1.4
Zebra/Peaceful Dove/Merbok	<i>Geopelia striata</i>	4.0.0
Pink-Necked Green Pigeon	<i>Treron vernans</i>	3.2.0

PSITTACIFORMES

<i>Loriidae</i>		
Black Lorikeet	<i>Chalcopsitta atra</i>	0.0.1
Chattering Lory	<i>Domicella garrula</i>	1.0.0
Blue Crowned Hanging Parrot	<i>Loriculus galgulus</i>	0.0.2
<i>Cacatuidae</i>		
Salmon-Crested Cockatoo	<i>Cacatua moluccensis</i>	1.0.0
Sulphur-Crested Cockatoo	<i>Cacatua galerita</i>	2.0.1
Lesser Sulphur-Crested Cockatoo	<i>Cacatua sulphurea</i>	0.1.0
Little Corella	<i>Cacatua sanguinea</i>	0.0.2
White crested-Cackatoo / White Cackatoo	<i>Cacatua alba</i>	1.2.0

<i>Psittacidae</i>		
Fischer's Lovebird	<i>Agapornis fischeri</i>	15.15.40
Black-Masked Lovebird	<i>Agapornis personatus</i>	0.0.1
Blue and Yellow Macaw	<i>Ara ararauna</i>	0.0.4
Green-Winged Macaw	<i>Ara chloropterus</i>	1.0.1
Scarlet Macaw	<i>Ara macao</i>	0.1.0
Eclectus Parrot	<i>Eclectus roratus</i>	1.0.0
African Grey Parrot	<i>Psittacus erithacus</i>	0.0.4
Lesser African Grey Parrot	<i>Psittacus erithacus</i>	0.0.1
Blue-fronted Amazon	<i>Amazona aestiva</i>	1.1.0
Ring-Necked/Rose-Ringed Parakeet	<i>Psittacula krameri</i>	2.0.0
Patagonian conure	<i>Cyanoliseus patagonus</i>	0.0.1

CUCULIFORMES

<i>Musophadidae</i>		
White-Bellied Go-Away Bird	<i>Corythaixoides leucogaster</i>	1.0.0
<i>Cuculifidae</i>		
Koel	<i>Eudynamys scolopacea</i>	3.3.0

STRIGIFORMES

<i>Tytonidae</i>		
Barn Owl	<i>Tyto alba</i>	0.0.1
<i>Strigidae</i>		
Barred Eagle Owl	<i>Bubo sumatranus</i>	0.0.3
Malay Buffy Fish Owl	<i>Ketupa ketupu</i>	5.3.2
Scops Owl	<i>Otus ireneae</i>	0.1.0
Spotted Wood Owl	<i>Strix seloputo</i>	0.0.3

CORACIIFORMES

<i>Bucerotidae</i>		
Oriental Pied Hornbill	<i>Anthracoceros albirostris</i>	1.1.2
Black Hornbill	<i>Anthracoceros malayanus</i>	0.0.4
Wrinkled Hornbill	<i>Aceros corrugatus</i>	1.2.6
Wreathed Hornbill	<i>Aceros undulatus</i>	1.2.0
White-Crested Hornbill	<i>Berenicornis comatus</i>	1.1.0
Bushy-Crested Hornbill	<i>Anorrhinus galeritus</i>	0.1.1
Greater Hornbill	<i>Buceros bicornis</i>	6.3.0
Rhinoceros Hornbill	<i>Buceros rhinoceros</i>	4.2.1
African Ground Hornbill	<i>Bucorvus leadbeateri</i>	0.1.0

PASSERIFORMES

<i>Pycnonotidae</i>		
Grey -Bellied Bulbul	<i>Pycnonotus cyaniventris</i>	0.0.1
Stripe -Throated Bulbul	<i>Pycnonotus finlaysoni</i>	0.0.2

Yellow-Vented Bulbul	<i>Pycnonotus goiavier</i>	0.0.3
Red-Whiskered Bulbul	<i>Pycnonotus jocosus</i>	0.0.2
Black-Crested Bulbul	<i>Pycnonotus melanicterus</i>	0.0.1
Black-Headed Bulbul	<i>Pycnonotus atriceps</i>	0.0.1
Straw-Crowned Bulbul	<i>Pycnonotus zeylanicus</i>	1.0.0
Sooty-headed Bulbul	<i>Pycnonotus aurigaster</i>	0.0.1
Collared Finch-Billed Bulbul	<i>Spizixos semitorques</i>	0.0.1
Ochraceous Bulbul	<i>Alophoixus ochraceus</i>	0.0.2

<i>Irenidae</i>		
Fairy Bluebird	<i>Irena puella</i>	2.1.0
<i>Muscicapidae</i>		
Magpie Robin	<i>Copsychus saularis</i>	3.1.0
Black-Throated Laughing Thrush	<i>Garrulax chinensis</i>	0.0.1
Red-Tailed Laughing Thrush	<i>Garrulax milnei</i>	0.0.1
Chestnut-Capped Laughing Thrush	<i>Garrulax mitratus</i>	0.0.1
White-Crested Laughing Thrush	<i>Garrulax leucolophus</i>	0.0.6
Pekin Robin/Red Billed Leothrix	<i>Leiothrix lutea</i>	0.0.1

<i>Estrildidae</i>		
Java Sparrow	<i>Padda oryzivora</i>	0.0.1
<i>Ploceidae</i>		
Baya Weaver	<i>Ploceus philippinus</i>	0.0.2

<i>Sturmidae</i>		
Common Myna	<i>Acridotheres tristis</i>	0.0.5
Hill Myna	<i>Gracula religiosa</i>	0.0.2
Glossy Starling	<i>Aplonis panayensis</i>	1.0.2

<i>Oriolidae</i>		
Black-Naped Oriole	<i>Oriolus chinensis</i>	0.0.2
<i>Corvidae</i>		
Blue Magpie	<i>Urocissa erythrorhyncha</i>	0.0.4

<i>Capitonidae</i>		
Lineated Barbet	<i>Megalaima lineata</i>	0.0.1
Golden-Whiskered Barbet	<i>Megalaima chrysopogon</i>	0.0.1
Golden-Throated Barbet	<i>Megalaima franklinii</i>	0.0.1
Brown Barbet	<i>Calorhamphus fuliginosus</i>	0.0.1

REPTILES

CRYPTODIRA

<i>Chelidae</i>		
Snake Neck Turtle	<i>Chelodina oblonga</i>	0.1.0
Matamata	<i>Chelus fimbriatus</i>	0.0.2
<i>Emydidae cryptodira</i>		
River Terrapin/Tuntung	<i>Batagur baska</i>	2.0.1
Malayan Painted Terrapin	<i>Callagur borneoensis</i>	1.1.0
Malayan Box-Turtle	<i>Cuora amboinensis</i>	9.8.7
Asian Leaf Turtle	<i>Cyclemys dentata</i>	0.1.0
Big-Headed/Malaysian Giant Turtle	<i>Orlitia borneensis</i>	2.4.0
Giant Asian Pond Turtle	<i>Heosemys grandis</i>	7.10.8
Black Terrapin	<i>Siebenrockiella crassicollis</i>	0.2.2
Red-Eared Slider	<i>Trachemys scripta elegans</i>	6.39.0
Alligator Snapping Turtle	<i>Macrolemys temminckii</i>	0.0.1
Pig-nose Turtle	<i>Carettochelys insculpta</i>	1.1.0

<i>Testudininae</i>		
Aldabra Tortoise	<i>Geochelone gigantea</i>	3.1.0
Elongated Tortoise	<i>Indotestudo elongata</i>	2.1.0
Asian Brown Tortoise	<i>Manouria emys emys</i>	1.2.0
Black Asian Giant Tortoise	<i>Monouria emys phayrei</i>	1.0.0

<i>Trionychidae trionychinae</i>		
Asiatic Softshelled Turtle	<i>Trionyx/Amyda cartilagineus</i>	2.1.3

CROCODYLIA

<i>Crocodylidae crocodylinae</i>		
Estuarine Crocodile	<i>Crocodylus porosus</i>	1.5.0
Siamese crocodile	<i>Crocodylus siamensis</i>	0.1.0
Dwarf Crocodile	<i>Osteolaemus tetraspis</i>	3.2.4
False Gavial	<i>Tomistoma schlegelii</i>	2.2.6
Spectacled Caimen	<i>Caiman crocodilus</i>	0.0.1

SAURIA

<i>Gekkonidae</i>		
Leopard Gecko	<i>Eublepharis macularius</i>	0.0.1
<i>Iguanidae</i>		
Green Iguana	<i>Iguana iguana</i>	3.0.3
<i>Varanidae</i>		
Malayan Water Monitor	<i>Varanus salvator</i>	1.1.0
Clouded Monitor	<i>Varanus bengalensis</i>	0.0.2
Rought-Necked Monitor	<i>Varanus rudicollis</i>	0.0.1

SERPENTES

<i>Boidae</i>		
Green Anaconda	<i>Eunectes murinus</i>	0.0.1
<i>Boidae erycinae</i>		
Sand Boa	<i>Eryx tataricus</i>	0.0.1
<i>Boidae pythoinae</i>		
Short Tailed/Blood Python	<i>Python curtus</i>	0.0.3
Burmese/Rock Python	<i>Python molurus bivittatus</i>	1.0.0
Albino Burmese Python	<i>Python molurus bivittatus</i>	1.0.0
Reticulated Python	<i>Python reticulatus</i>	4.1.4
<i>Xenopeltidae</i>		
Sunbeam Snake	<i>Xenopeltis unicolor</i>	0.1.0
<i>Acrochoridae</i>		
Elephant Trunk Snake	<i>Acrocordus javanicus</i>	0.0.1
<i>Colubridae</i>		
Oriental Whip Snake	<i>Ahaetulla prasina</i>	0.0.5
Yellow-Ringed Cat Snake	<i>Boiga dendrophilia</i>	0.0.2
Malayan Cave Racer		1.0.0
Radiated Ratsnake	<i>Elaphe radiata</i>	0.1.1
Red-Tailed Ratsnake	<i>Gonyosoma oxycephalum</i>	1.0.1
Indochinese Rat Snake	<i>Pytas korros</i>	0.0.3
Dark-headed Cat Snake	<i>Boiga nigriceps</i>	0.0.2
Triangle keelback	<i>Xenochrophis trianguligerus</i>	0.0.1
Orange necked keelback		0.0.1
Puff - faced Water Snake	<i>Homalopsis buccata</i>	0.0.2
<i>Elapidae</i>		
Monocellate Cobra	<i>Naja kaouthia</i>	1.3.0
Central Asian/Afghanistan Cobra	<i>Naja naja oxiana</i>	1.0.0
Common Spitting Cobra	<i>Naja sumatrana</i>	0.0.3
King Cobra	<i>Ophiophagus hannah</i>	1.0.0
Malayan Krait	<i>Bungarus candidus</i>	1.0.1

<i>Viperidae crotalinae</i>		
Malayan Pit Viper	<i>Calloselasma rhodostoma</i>	1.0.0
Shore Pit Viper	<i>Trimeresurus purpureomaculatus</i>	1.2.0
Hagen's/Indonesian Pit Viper	<i>Trimeresurus hageni</i>	0.0.1
Wagler's Pit Viper	<i>Tropidolaemus wagleri</i>	1.1.0
White-Lipped Pit Viper	<i>Trimeresurus albolabris</i>	1.2.0
Sumatran Pit Viper	<i>Trimeresurus sumatranus</i>	0.0.1
Big Eyed Pit Viper	<i>Trimeresurus macrops</i>	0.0.1



CENSUS

AMPHIBIAN

RANIDAE		
White-lipped frog	<i>Rana raniceps</i>	2.3.3
Poisonous Rock frog	<i>Rana hossi</i>	2.4.4
Green Paddy frog	<i>Rana erythraea</i>	2.4.12
Rough-sided frog	<i>Rana glandulosa</i>	0.0.1
Malayan giant frog	<i>Limnonectes malesianus</i>	0.0.1
Blyth's river frog	<i>Limnonectes blythii</i>	0.0.1
Mahogany frog	<i>Rana luctuosa</i>	0.0.2
BUFONIDAE		
Brown tree toad	<i>Pedostybes hosii</i>	3.7.0
River toad	<i>Bufo asper</i>	0.1.6
Collett's tree frog	<i>Polypedates colletti</i>	0.0.3
Rice Paddy frog	<i>Occidozygo lima</i>	5.0.7
MEGOPHRYIDAE		
Asian horned frog	<i>Megophyrys nasuta</i>	1.1.6
Montane horned frog	<i>Megophyrys longipes</i>	0.1.0
RHACOPHORIDAE		
Golden tree frog	<i>Polypedates lenconystax</i>	3.6.0
Wallace's flying frog	<i>Rhacophorus nigropalmatus</i>	0.0.2
Reinwardat's flying frog	<i>Rhacophorus reinwardti</i>	0.0.1
Harlegrin tree frog	<i>Rhacophorus pardalis</i>	0.0.1
Flying tree frog	<i>Rhacophorus dulitensis</i>	0.0.4
Spotted tree frog	<i>Nyctixalus pictus</i>	0.0.2
MICROHYLIDAE		
Banded bull frog	<i>Kaloula pulchra</i>	0.0.9
LEPTODACTYLIDAE		
White's tree frog	<i>Pelodyds caerulea</i>	0.0.1
Toad		0.0.3

FISH

FRESHWATER FISH (NATIVE SPECIES)		
<i>Acanthuroidei</i>		
Horse-faced Loach/Ikan Pasir	<i>Acantopsis dialuzona</i>	0.0.12
<i>Anabantidae</i>		
Climbing Perch/Puyu	<i>Anabas testudineus</i>	0.0.14
<i>Aplocheilidae</i>		
Whitespot/Kepala Timah	<i>Aplocheilus panchax</i>	0.0.4
<i>Bagridae</i>		
Black Lancer	<i>Bagrichthys hyselopecterus</i>	0.0.13
Marble Lancer	<i>Bagrichthys sp.</i>	0.0.1
Comb Goby/Tilan	<i>Ctenotrypauchen microcephalus</i>	0.0.6
Asian Redtail Catfish/Baung Kunyit	<i>Hemibagrus nemurus</i>	0.0.5
Red-tailed Catfish	<i>Mystus micracanthus</i>	0.0.3
Baung Belang	<i>Mystus nigriceps</i>	0.0.2
Baung Akar	<i>Mystus planiceps</i>	0.0.12
Striped Dwarf Catfish	<i>Mystus vittatus</i>	0.0.1
Baung Tikus	<i>Mystus sp.</i>	0.0.19
Baung Murai	<i>Mystus wyckii</i>	0.0.2
<i>Balitoridae</i>		
Hillstream Loach	<i>Gastromyzon spp.</i>	0.0.37
<i>Belonidae</i>		
Freshwater Garfish/Julong	<i>Xenentodon cancilooides</i>	0.0.11
<i>Belontiidae</i>		
Javan Combtail/Tebakang	<i>Belontia hasselti</i>	0.0.12
Bellicose Fighting Fish/Belaga	<i>Betta bellica</i>	0.1.0
-	<i>Betta chini</i>	0.1.1
Crescent Betta	<i>Betta imbellis</i>	0.3.4
Emerald-spot Fighting Fish/Sepilai Merah	<i>Betta livida</i>	0.4.5
Forest Fighting Fish	<i>Betta pugnax</i>	0.0.5
Siamese Fighting Fish/Pelaga	<i>Betta splendens</i>	0.10.7
Dwarf Gourami	<i>Colisa lalia</i>	0.0.2
Licorice Gourami/Karim	<i>Parosphromenus harveyi</i>	0.0.4
Chocolate Gourami/Biji Durian	<i>Sphaerichthys osphromenoides</i>	0.0.6

Pearl Gourami	<i>Trichogaster leeri</i>	0.0.41
Moonlight Gourami	<i>Trichogaster microlepis</i>	0.0.18
Two-Spot Gourami	<i>Trichogaster trichopterus</i>	0.0.6
Blue Gourami	<i>Trichogaster trichopterus</i>	0.0.9
Golden Gourami	<i>Trichogaster trichopterus</i>	0.0.2
Croaking Gourami/Karim	<i>Trichopsis vittata</i>	0.0.2
Snake skin Gourami	<i>Trichogaster pectoralis</i>	0.0.10
<i>Channidae</i>		
Blackwater Snakehead	<i>Channa bankanensis</i>	0.0.2
Dwarf Snakehead/Bakap	<i>Channa gachua</i>	0.0.1
Forest Snakehead/Bujok	<i>Channa lucius</i>	0.0.2
Flower Snakehead/Toman Bungah	<i>Channa marulioides</i>	0.0.10
Giant Snakehead/Toman	<i>Channa micropeltes</i>	0.0.6
<i>Clariidae</i>		
African Catfish	<i>Clarias gariepinus</i>	0.0.3
Forest Walking Catfish/Keli Hutan	<i>Clarias teijsmanni</i>	0.0.1
<i>Cobitidae</i>		
Loach	<i>Botia hymenophysa</i>	0.0.3
Pakistani Loach	<i>Botia lohachata</i>	0.0.2
Orange-finned Loach	<i>Botia modesta</i>	0.0.10
Clown Loach	<i>Chromobotia macracanthus</i>	0.0.37
Lesser Loach	<i>Lepidocephalus thermalis</i>	0.0.4
Kuhli Loach	<i>Pangio kuhlii</i>	0.0.28
Skunk Botia	<i>Yasuhikotakia morleti</i>	0.0.84
<i>Cyprinidae</i>		
Bala Shark	<i>Balantiocheilus melanopterus</i>	0.0.20
Tinfoil Barb/Lampam Sungai	<i>Barbonymus schwanenfeldii</i>	0.0.11
Tinfoil Barb/Lampam Sungai	<i>Barbonymus sp.</i>	0.0.12
Golden Barb	<i>Barbus sachsii</i>	0.0.1
Dwarf Rasbora	<i>Boraras maculatus</i>	0.0.30
Plain Goldfish	<i>Carassius sp.</i>	0.0.5
Cherry Barb	<i>Copoeta titteya</i>	0.0.3
Siamese Algae Eater/Selimang	<i>Crossocheilus siamensis</i>	0.0.31
Red-eyed Barb/Chemperas	<i>Cyclocheilichthys apogon</i>	0.0.8
Koi/Japanese Carp	<i>Cyprinus carpio</i>	0.0.34
Flying Fox/Selimang Batang	<i>Epalzeorhynchos kalopterus</i>	0.0.30
Hampala/Sebarau	<i>Hampala macrolepidota</i>	0.0.12
Krai Emas/Krai Kunyit	<i>Hypsibarbus pierrei</i>	0.0.28
Black Shark / Jenkua	<i>Labeo chrysophekadion</i>	0.0.39
Red-finned Shark	<i>Labeo erythrurus</i>	0.0.22
Rohu	<i>Labeo rohita</i>	0.0.3
Lomah/Lemek	<i>Labiobarbus ocellatus</i>	0.0.9
Kawan	<i>Labiobarbus sp.</i>	0.0.12
Sultan Fish/ Jelawat	<i>Leptobarbus hoevenii</i>	0.0.16
-	<i>Lobocheilus bo</i>	0.0.1
Bulat	<i>Lobocheilus sp.</i>	0.0.1
Apollo Shark	<i>Luciosoma sp.</i>	0.0.15
Ikan Daun	<i>Neolissochilus soroides</i>	0.0.13
Silver Sharkminnow/Terbol	<i>Osteochilus hasselti</i>	0.0.39
Ikan Rong	<i>Osteochilus microcephalus</i>	0.0.16
Tengas	<i>Poropuntius dearatus</i>	0.0.48
Jullien's Barb/Temoleh	<i>Probarbus jullieni</i>	0.0.17
Two spot Barb/Tebal Sisik	<i>Puntius binotatus</i>	0.0.8
Tenggalan	<i>Puntius bulu</i>	0.0.7
Malayan Clown Barb/Bagoh	<i>Puntius dunckeri</i>	0.0.57
Melon Barb	<i>Puntius fasciata</i>	0.0.14
Javanese Barb/Lampan Jawa	<i>Puntius gonionotus</i>	0.0.5
Six-banded Barb	<i>Puntius hexazona</i>	0.0.8
T-Barb/Bagoh	<i>Puntius lateristriga</i>	0.0.17
Lined Barb/Striped Barb	<i>Puntius lineatus</i>	0.0.82
Gold-finned Barb/Pipi Merah	<i>Puntius orphoides</i>	0.0.15
Rhombo Barb	<i>Puntius rhomboocellatus</i>	0.0.24
Tiger Barb/Pelampong Jaring	<i>Puntius tetrazona</i>	0.0.35
Greater Scissortail/Bada Seluang	<i>Rasbora caudimaculata</i>	0.0.35
Head-band Rasbora/Bada Seluang	<i>Rasbora cephalotaenia</i>	0.0.3
Elegant Rasbora	<i>Rasbora elegans</i>	0.0.38

Einthoven's/Blue Line Rasbora	<i>Rasbora einthovenii</i>	0.0.51
Black Stripe Rasbora	<i>Rasbora gracilis</i>	0.0.3
Harlequin Rasbora	<i>Rasbora hengeli</i>	0.0.21
Harlequin Rasbora	<i>Rasbora heteromorpha</i>	0.0.21
-	<i>Rasbora jayarami</i>	0.0.19
Redstripe Rasbora	<i>Rasbora pauciperforata</i>	0.0.118
Two-spot Rasbora	<i>Rasbora sumatrana</i>	0.0.27
Scissortail Rasbora	<i>Rasbora trilineata</i>	0.0.31
Green-eye Rasbora	<i>Rasbora sp.</i>	0.0.48
White Cloud Minnow	<i>Tanichthys albonubes</i>	0.0.7
Glowlight Rasbora	<i>Trigonostigma hengeli</i>	0.0.18
Blue-fin Kelah/Kelah	<i>Tor duoronensis</i>	0.0.3
Malaysian Mahseer/Kelah	<i>Tor tambroides</i>	0.0.20
<i>Dasyatidae</i>		
Freshwater Stingray	<i>Himantura sp.</i>	0.0.5
<i>Datnioididae</i>		
Finescale Tigerfish	<i>Datnioides microlepis</i>	0.0.3
<i>Gobiidae</i>		
Bumblebee Goby	<i>Brachygobius sp.</i>	0.0.24
<i>Helostomatidae</i>		
Kissing Gourami	<i>Helostoma temmincki</i>	0.0.1
<i>Hemiramphidae</i>		
Forest Halfbeak/Julong	<i>Dermogenys pusilla</i>	0.0.43
<i>Luciocephalidae</i>		
Pikehead/Tembok Tebing	<i>Luciocephalus pulcher</i>	0.0.2
<i>Mastacembelidae</i>		
Fire Eel/Tilan	<i>Mastacembelus erythrotaenia</i>	0.0.4
Zig zag Eel/Tilan	<i>Mastacembelus armatus</i>	0.0.4
Freshwater Eel/Belut	<i>Monopterus albus</i>	0.0.5
<i>Nandidae</i>		
Bornean Leaf Fish/Patung	<i>Nandus nebulosus</i>	0.0.6
Banded Leaf Fish/Patung	<i>Pristolepis fasciata</i>	0.0.2
<i>Notopteridae</i>		
Clown Featherback/Belida	<i>Chitala sp.</i>	0.0.1
Spotted Knife Fish/Belida	<i>Chitala sp.</i>	0.0.6
Common Knife-fish/Potak/Belida	<i>Notopterus notopterus</i>	0.0.1
Royale Feather Back	<i>Chitala blanci</i>	0.0.5
<i>Osphronemidae</i>		
Giant Gourami	<i>Osphronemus goramy</i>	0.0.3
Golden Giant Gourami	<i>Osphronemus goramy</i>	0.0.4
Sabah Giant Gourami	<i>Osphronemus goramy</i>	0.0.5
<i>Osteoglossidae</i>		
Kelisa	<i>Scleropages sp.</i>	0.0.7
<i>Pangasiidae</i>		
Shortbarbel Pangasius/Patin	<i>Pangasius micronemus</i>	0.0.5
Patin Buah	<i>Pangasius nasutus</i>	0.0.12
Yellowtail Catfish/Patin	<i>Pangasius pangasius</i>	0.0.3
<i>Siluridae</i>		
Glass Catfish	<i>Kryptopterus bicirrhis</i>	0.0.17
Lais	<i>Kryptopterus cryptopterus</i>	0.0.1
Tapah	<i>Wallago leerii</i>	0.0.6
<i>Sisoridae</i>		
Dwarf Goonch/Kenarak	<i>Bagarius yarrelli</i>	0.0.2
Wrinkled Bellied Cat Fish/ Depu	<i>Glyptothorax major</i>	0.0.1
<i>Tetraodontidae</i>		
Brown Puffer	<i>Tetraodon palembangensis</i>	0.0.2
Green Puffer	<i>Tetraodon nigroviridis</i>	0.0.4
Micro Puffer	<i>Tetraodon sp.</i>	0.0.7

FRESHWATER FISH NON-NATIVE SPECIES		
<i>Callichthyidae</i>		
Leopard Cory	<i>Corydoras trilineatus</i>	0.0.8
<i>Characidae</i>		
Pacu	<i>Colossoma macropomum</i>	0.0.16
Silver Dollar	<i>Metynnis schreitmuelleri</i>	0.0.18
<i>Cichlidae</i>		
Midas Cichlid	<i>Amphilophus citrinellus</i>	0.0.143
Tilapia	<i>Oreochromis mossambicus</i>	0.0.323
Mangunese	<i>Parachromis mangunese</i>	0.0.2
<i>Cobitidae</i>		
Burmese Loach	<i>Lepidocephalichthys berdmorei</i>	0.0.20
<i>Cyprinidae</i>		
Pearl Danio	<i>Danio albolineatus</i>	0.0.24
<i>Lepisosteidae</i>		
Alligator Gar	<i>Atractosteus spatula</i>	0.0.5
<i>Loricariidae</i>		
Suckermouth Catfish	<i>Hypostomus plecostomus</i>	0.0.28
Golden Otocinclus	<i>Otocinclus affinis</i>	0.0.9
<i>Melanotaeniidae</i>		
Boesman's Rainbowfish	<i>Melanotaenia boesmani</i>	0.0.10
Blue Rainbowfish	<i>Melanotaenia caerulea</i>	0.0.5
MacCulloch's Rainbow Fish	<i>Melanotaenia maccullochi</i>	0.0.15
Dwarf Rainbowfish	<i>Melanotaenia praecox</i>	0.0.10
<i>Osteoglossidae</i>		
Arapaima/Pirarucu	<i>Arapaima gigas</i>	0.0.4
Silver Arowana	<i>Osteoglossum bicirrhosum</i>	0.0.3
<i>Pimelodidae</i>		
Red-tailed Catfish	<i>Phractocephalus hemeliopterus</i>	0.0.3
SALTWATER FISH		
<i>Cyprinidae</i>		
Indo-Pacific Tarpon/Bulan	<i>Megalops cyprinoides</i>	0.0.11

INVERTEBRATES

CRUSTACEANS		
Giant River Prawn	<i>Macrobrachium rosenbergii</i>	0.0.22

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Y. Bhg. Datuk Bandar and Officers of Dewan Bandaraya Kuala Lumpur

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