The Malaysian Zoological Society would like to thank our Royal Patron

HIS ROYAL HIGHNESS THE SULTAN OF SELANGOR
SULTAN SHARAFUDDIN IDRIS SHAH ALHAJ IBNI
ALMARHUM SULTAN SALAHUDDIN ABDUL AZIZ SHAH ALHAJ

SULTAN AND RULER OF THE STATE OF SELANGOR DARUL EHSAN
AND ALL ITS DEPENDENCIES
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COUNCIL MEMBERS

ACTING PRESIDENT

VICE PRESIDENTS
En. Rosly @ Rahmat Ahmat Lana
Y. Bhg. Dato’ Lau Yau Tian, S.P.M.J.
En. Mohamed Seth Ismail

ORDINARY MEMBERS
Mr. James Bush, M.I.P.R.M
Pn. Azizah Abdul Ghani
Pn. Siti Nooruhani Ibrahim
En. Hassan Samion
En. Mohd Rosdi Ibrahim

EX-OFFICIO MEMBERS
Mr. Mariappan Chinniah
(Dewan Bandaraya Kuala Lumpur)

Dr. Zaaba Bin Zainol Abidin
(Department of Wildlife and National Parks Peninsular Malaysia)

En. Wanchick Zainal Abidin
(Selangor State Government)

En. Amran Alias
(Ministry of Natural Resources & Environment Malaysia)

SECRETARIES
Fiscal Corporate Services Sdn. Bhd.

AUDITOR
Sahir Yap. & Co

LEGAL ADVISOR
Salehuddin Saidin & Associates
COMMITTEES (CHAIRMAN)

Finance

Human Resource & Administration
En. Rosly @ Rahmat Ahmat Lana

Public Affairs & Marketing
En. Hassan Samion

Development & Planning

Education
En. Rosly @ Rahmat Ahmat Lana

Park & Gardens
En. Mohamed Seth Ismail

Animal Welfare & Ethics
Y. Bhg. Dato’ Lau Yau Tian, S.P.M.J.
It is a great pleasure to present to you the Malaysian Zoological Society (MZS) Annual Report for 2013, another successful year for our zoo.

For me, it was the first full year of having to hold two positions; as Acting President of MZS and as Director of Zoo Negara Malaysia. What continues to motivate me more than anything else is the opportunity to contribute towards the mission and vision of Zoo Negara Malaysia as we work towards a ‘World Class Zoo’.

I am proud to announce that since the enforcement of the Wildlife Conservation Act 2010, Zoo Negara is the first Malaysian Zoo to receive its operational permit. Zoo Negara also has been recertified by SIRIM for the ISO 9001 : 2008 Quality Management System (QMS).

**HIGHLIGHTS OF THE YEAR**

**Giant Panda Programme**

The ‘Giant Panda Protection and Research Programme’ agreement was officially signed between MZS and the Federal Government, represented by the Department of Wildlife and National Parks (DWNP) on 22nd June 2013.

The construction of the Giant Panda Conservation and Exhibition Centre at the cost of RM24.9 million took place on a 1.6 acre of land within the zoo compound.

In preparation towards this programme, several areas within the zoo were upgraded by agencies under the Ministry of Natural Resources and Environment (NRE). This includes landscape of Zoo Negara by the Forest Research Institute of Malaysia (FRIM), the remediation of Tunku Abdul Rahman Lake by the National Hydraulic Research Institute of Malaysia (NAHRIM) and infrastructure development by the Department of Irrigation and Drainage (DID).

The zoo was actively involved in sourcing and planting of various Bamboo species to meet the dietary and nutritional needs of the Giant Panda.

**Upgrading of Animal Exhibits**

The RM8.2 million that was granted by the Federal Government for the upgrading of the animal exhibits was not completed as scheduled but extended to the first quarter of 2014. This upgrading work included the construction of the Asian Elephant, Hippopotamus, Chimpanzee and Bear exhibits.

The expertise and dedication of the zoo staff has been well recognized and having said that, I have initiated frequent get-togethers to build closer relationships with zoo employees. Following this, special incentives have been introduced including special monetary allowances and educational trips to name a few.
Capacity Building

As part of acquiring new expertise, selected staff were sent for training at various zoological parks including the River Safari in Singapore, Chiangmai Zoo in Thailand, Hong Kong Ocean Park and Bifengxia Panda Conservation Centre in Ya’an Sichuan, China. Such exposure would enable our staff to competently handle the husbandry and management aspects of Giant Panda.

In addition, staff also attended various seminars and workshops organized by the zoo and other agencies.

Animal Acquisition

As for new animal addition this year, we welcomed three White Bengal Tigers (*Panthera tigris tigris*) from Indira Gandhi Zoological Park, India in exchange for our three captive bred Reticulated Giraffes (*Giraffa camelopardalis*) and four Black and White Ruffed Lemurs (*Varecia variegata*) from Le Thanh Than Zoo, Vietnam in exchange for a pair of our Indian Gours (*Bos gaurus gaurus*).

Our collaborative conservation effort with DWNP for the Milky Stork (*Mycteria cinerea*) saw the release of ten birds at the Kuala Gula Bird Sanctuary, Perak.

Future Plans

Looking to the future, we received full planning consent towards establishment of the following:

1. Non compliance exhibits upgrade based on the audit done by DWNP
2. Major electrical cabling works
3. Water reticulation system throughout the zoo
4. Review of the animal collection

On behalf of the Malaysian Zoological Society, I would like to extend our appreciation to the Federal Government, State Government, NRE, various Government agencies under NRE, members of MZS, generous sponsors and donors, volunteers for their time and effort, not forgetting the staff of Zoo Negara Malaysia for their dedication and relentless support.

Last but not least, I would like to express my deepest appreciation towards individuals and agencies that were directly or indirectly involved in contributing to Zoo Negara Malaysia.
The Development and Planning committee (DPC) continued with its policy of improvement within the Zoo during 2013.

### Development Projects:

<table>
<thead>
<tr>
<th>NO.</th>
<th>WORKS COMPLETED BY 31 DECEMBER 2013</th>
<th>COST (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rectification work using water proofing silicon to existing roofing of the souvenir shop.</td>
<td>45,090.00</td>
</tr>
<tr>
<td>2.</td>
<td>Upgrading of Customer Service office.</td>
<td>8,193.00</td>
</tr>
<tr>
<td>3.</td>
<td>Installing of interlocking pavers in front of Flamingo enclosure.</td>
<td>13,760.00</td>
</tr>
<tr>
<td>4.</td>
<td>Upgrading of ticketing system counter at Car Park B.</td>
<td>73,670.00</td>
</tr>
<tr>
<td>5.</td>
<td>Reinstalling existing galvanised iron pipe fencing at the Malayan Gaur exhibit.</td>
<td>24,000.00</td>
</tr>
<tr>
<td>6.</td>
<td>Repair work of staff quarters.</td>
<td>11,080.00</td>
</tr>
<tr>
<td>7.</td>
<td>Replacing gabion walls along Sungai Kemensah, Sungai Pandang and the Tunku Abdul Rahman Lake.</td>
<td>92,690.00</td>
</tr>
<tr>
<td>8.</td>
<td>Construction of interlocking pavers for rubbish disposal at entrance to Banteng night quarters.</td>
<td>25,600.00</td>
</tr>
<tr>
<td>9.</td>
<td>Construction of interlocking pavers for rubbish disposal at Savannah service entrance.</td>
<td>24,972.00</td>
</tr>
<tr>
<td>10.</td>
<td>Upgrading work at the animal show amphitheatre.</td>
<td>103,162.00</td>
</tr>
<tr>
<td>11.</td>
<td>Zoo signages.</td>
<td>22,150.00</td>
</tr>
<tr>
<td>12.</td>
<td>Rectification work at Gate 3.</td>
<td>6,500.00</td>
</tr>
<tr>
<td>13.</td>
<td>Rectification work at Bird House.</td>
<td>10,968.00</td>
</tr>
<tr>
<td>14.</td>
<td>Reinstalling of interlocking pavers opposite Emu enclosure.</td>
<td>15,940.00</td>
</tr>
<tr>
<td>15.</td>
<td>Rectification work at Saltwater Crocodile enclosure.</td>
<td>104,508.00</td>
</tr>
<tr>
<td>16.</td>
<td>Rectification works at False Gharial enclosure.</td>
<td>111,282.00</td>
</tr>
<tr>
<td>17.</td>
<td>Upgrading of public toilet at Reptile House.</td>
<td>59,324.00</td>
</tr>
<tr>
<td>18.</td>
<td>Upgrading works at Ape Centre.</td>
<td>80,366.00</td>
</tr>
<tr>
<td>19.</td>
<td>Replacing laminated glass panel at tank no.13 in Akuarium Tunku Abdul Rahman.</td>
<td>25,000.00</td>
</tr>
<tr>
<td>20.</td>
<td>Construction of a new sliding gate and modification of existing fencing to a new swing gate at Savannah.</td>
<td>25,212.00</td>
</tr>
</tbody>
</table>
GIANT PANDA CONSERVATION AND EXHIBITION CENTRE

This year, the Federal Government approved Zoo Negara as the site for the development of the Giant Panda Conservation and Exhibition Centre. The RM24.9million complex has an established internal controlled environment, facilities for veterinary care, husbandry management and landscaped exhibits.

The display area is divided into an indoor and outdoor exhibit. The centre includes facilities such as night stalls, monitoring room, laboratory, bamboo storage, conference room, visitor facilities such as souvenir shop, cafeteria, washroom and others. The construction started in March and was completed in December.

As a result of this development project, a one-off grant of RM5million was given to Zoo Negara for relocation of animal exhibits, public amenities and special projects. These include:

1. Demolishing work at Giant Panda Complex site
2. Construction of Butterfly Garden
3. Displacement of animal exhibits
4. Construction of public washroom
5. Cultivation of bamboo
6. Giant Panda management and husbandry training
UPGRADING OF THE ANIMAL EXHIBIT

An additional RM8.2million was granted to Zoo Negara for the following:

- New Asian Elephant exhibit
- New Hippopotamus exhibit
- New Chimpanzee exhibit
- Upgrading of Bear exhibit

The various agencies under the Ministry of NRE involved in upgrading projects:

1. Department of Irrigation and Drainage (DID) worked on improving infrastructure, sewerage and information signs.
2. National Hydraulic Research Institute of Malaysia (NAHRIM) worked on the remediation of Tunku Abdul Rahman Lake.
3. Forest Research Institute of Malaysia (FRIM) improved the zoo landscape.
PROPOSED DEVELOPMENT PROJECTS FOR YEAR 2014

In addition to the work already carried out, a number of projects have been proposed by the various members of the DPC and Zoo staff. The list below itemizes those projects which are now under consideration:

1. Upgrading of animal enclosures.
2. Upgrading of existing roads and walkway pavings.
4. Upgrading of existing public toilets at Surau.
5. Upgrading of existing car parks and construction of new car parks.
6. Upgrading of water supply system.
7. Upgrading of electrical cabling, feeder pillars and energy saving system.
9. Upgrading of staff quarters.

Upgrading of existing car parks

Upgrading of staff quarters

Upgrading of existing roads and walkway pavings
HUMAN RESOURCE

The Administration and Human Resource Committee’s main focus for the year was on staff training. The goal was to produce knowledgeable and competent staff for the workplace.

Training programmes for the year:

<table>
<thead>
<tr>
<th>Date</th>
<th>Course Title</th>
<th>Venue</th>
<th>No. of Participant</th>
</tr>
</thead>
<tbody>
<tr>
<td>26th March</td>
<td>“Managing Your Office Record and Filing Systems”</td>
<td>Tunku Abdul Rahman Theatre, Zoo Negara Malaysia</td>
<td>24 staff</td>
</tr>
<tr>
<td>10th – 11th April</td>
<td>“ISO 9001:2008 Understanding and Implementation of QMI” by SIRIM</td>
<td>Tunku Abdul Rahman Theatre, Zoo Negara Malaysia</td>
<td>48 staff</td>
</tr>
<tr>
<td>8th May</td>
<td>“First Aid and CPR Training”</td>
<td>Tunku Abdul Rahman Theatre, Zoo Negara Malaysia</td>
<td>35 staff</td>
</tr>
<tr>
<td>13th June</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18th June</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24th – 29th June</td>
<td>“Giant Panda Husbandry and Management Training”</td>
<td>Singapore Zoo</td>
<td>6 staff</td>
</tr>
<tr>
<td>22nd July</td>
<td>“Information and Demonstration of Health Natural Hydro”</td>
<td>Tunku Abdul Rahman Theatre, Zoo Negara Malaysia</td>
<td>20 staff</td>
</tr>
<tr>
<td>21st August – 3rd September</td>
<td>Giant Panda Husbandry and Management Training</td>
<td>Chiangmai Zoo, Thailand</td>
<td>8 staff</td>
</tr>
<tr>
<td>11th – 12th September</td>
<td>Facilitator Workshop on Environmental Education for Outdoor Classroom Learning</td>
<td>Forest Research Institute of Malaysia</td>
<td>2 staff</td>
</tr>
<tr>
<td>25th October</td>
<td>Giant Panda Roundtable Discussion</td>
<td>River Safari, Singapore</td>
<td>3 staff</td>
</tr>
<tr>
<td>Date</td>
<td>Event</td>
<td>Location</td>
<td>Participants</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>2nd – 8th November</td>
<td>Giant Panda Husbandry and Management Training</td>
<td>Ya’an Bifengxia Panda Base, Sichuan, China</td>
<td>8 staff</td>
</tr>
<tr>
<td>4th – 8th November</td>
<td>Educational Visit</td>
<td>Beijing Zoo, China</td>
<td>5 staff</td>
</tr>
<tr>
<td>22nd November</td>
<td>Educational Visit</td>
<td>Songkhla Zoo, Thailand</td>
<td>16 staff</td>
</tr>
<tr>
<td>15th – 17th December</td>
<td>Giant Panda Familiarisation Visit</td>
<td>River Safari, Singapore</td>
<td>2 staff</td>
</tr>
<tr>
<td>22nd – 30th December</td>
<td>Giant Panda Breeding Management Training</td>
<td>Ocean Park, Hong Kong</td>
<td>1 staff</td>
</tr>
</tbody>
</table>

This year, the Acting President suggested a dialogue session between him, the Vice President of MZS and staff. Following this, HRD implemented the idea with its first meeting held on 3rd April 2013. This meeting was aimed to hear recommendations from the staff as well as to create a closer relationship between the Management and staff. Following this, special incentives have been introduced including special monetary allowances, education rewards to staff children who excel in their national level examination and educational trips for staff to name a few. The Management then suggested that such meeting be held every quarterly.
Staff Activities

The Department organized a Badminton Tournament on 12th, 13th and 15th June 2013. It was participated by 50 staff. Participants were divided into two categories: the Men’s Double and Mix Double. The winners of each category are as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Men’s Double</th>
<th>Mix Double</th>
</tr>
</thead>
</table>
| Winners  | Champion:  
En. Rosly @ Rahmat Ahmat Lana 
& En. Jafree | Champion:  
Sezali Abd Aziz 
& Nursyafiqah |
|          | 2nd Prize:  
Sezali Abd Aziz 
& Ridwan Fitri Ishak | 2nd Prize:  
Christopher Caine Xavier 
& Nurshahirah |
|          | 3rd Prize:  
Shaiful Firdauze Ahmad 
& Mohd Yusrizan Yahya | 3rd Prize:  
Mahat Mohamed 
& Nurul Nadira |
The closing event of the year organized by HRD was a “Pesta Buah-buahan” or Fruit Fest held on 14th December 2013. Staff and their families were treated with various local fruits such as durians, rambutans, mangosteen, etc.

Staff Promotion

The MZS would like to congratulate the following staff on their promotion:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Current Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Aslifatihah Ahmad</td>
<td>Head of Department</td>
</tr>
<tr>
<td>2.</td>
<td>Rospata Mohamad</td>
<td>Asst. Head of Department</td>
</tr>
<tr>
<td>3.</td>
<td>Muhammad Faiz Haji Mohd Shah</td>
<td>Asst. Head of Department</td>
</tr>
<tr>
<td>4.</td>
<td>Mahat Mohamed</td>
<td>Senior Officer</td>
</tr>
<tr>
<td>5.</td>
<td>Ahmad Nizam Zainudin</td>
<td>Senior Supervisor</td>
</tr>
<tr>
<td>6.</td>
<td>Ishak Bakar</td>
<td>Senior Supervisor</td>
</tr>
<tr>
<td>7.</td>
<td>Mohamad Salihin Senawi</td>
<td>Supervisor</td>
</tr>
<tr>
<td>8.</td>
<td>Mohd Effendi Radzuan</td>
<td>Asst. Supervisor</td>
</tr>
<tr>
<td>9.</td>
<td>Kamarul Amirudin Kamaruzaman</td>
<td>Asst. Supervisor</td>
</tr>
</tbody>
</table>
RECERTIFICATION AUDIT

A recertification audit was conducted by the Standards and Industrial Research Institute of Malaysia (SIRIM), led by Pn. Mariam Muhamad Zain on the 20th and 21st June 2013.

Following this, the zoo was awarded the ISO 9001:2008 certification from 16th July 2013 to 9th July 2016.

CALLIBRATION

SIRIM Standard Technology Sdn. Bhd. carried out a calibration exercise of equipments in the Zoology, Kitchen and Zoo Hospital in July 2013.
**PRE-AUDIT BY INTERNAL AUDITOR**

ISO 9001:2008 pre-audit was conducted by our internal auditors from 7th - 30th September 2013. The goal was to update the Quality Management System (QMS) in terms of manual, procedure, guideline, work instruction and records.

**NEW IMPLEMENTATION ON CONTRACTOR WORK PERMIT IN ZOO NEGARA**

The Department implemented the work permit for contractors in order to monitor their compliance to our safety standard during their tenure at the zoo.

**ISO 9001 : 2008 UNDERSTANDING AND IMPLEMENTATION**

Awareness training on Understanding and Implementation of the ISO9001:2008 was carried out from 10th to 11th April 2013 by SIRIM to enhance the aspects contained in the QMS.

*Award recertification ISO 9001:2008*
Information Technology Department (ITD) welcomed our new Graphic Designer, Mr. Ahmad Akmal Mohd Hasim who has also been appointed as the official photographer.

For the year 2013, the Department continued to support various promotional activities conducted by Zoo Negara, namely:

1. Design of promotional posters, buntings and banners for the Giant Panda Conservation Project.
2. Design of the new Zoo Negara brochure.
3. Design of Zoo Negara’s table calendar 2014 in conjunction with the celebration of the “Year of the Bear”. The calendar contains educational fun facts of eight species of bears.
4. Giant Panda photography assignment at Singapore Zoo, Sichuan and Beijing, China.
In addition, the Department was involved in the preparation of the official events at Zoo Negara such as the Giant Panda Protection & Research Programme Signing Ceremony Memorandum of Agreement between Government of Malaysia and MZS, multiple visits by the Ministers, MZS Annual General Meeting and etc.
The core function of the Department includes events, sponsorships and media relations. This year, we observed positive improvements as compared to the previous year.

**EVENTS**

Some of the highlights for the year are listed below:

<table>
<thead>
<tr>
<th>MONTH</th>
<th>ACTIVITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>Pandas Press Conference</td>
</tr>
<tr>
<td>January</td>
<td>Brunei Embassy visit</td>
</tr>
<tr>
<td>March</td>
<td>Wanita Hari Ini Live at the Show Ampitheatre</td>
</tr>
<tr>
<td>March</td>
<td>Minister of NRE and China Embassy site visit and meeting</td>
</tr>
<tr>
<td>May</td>
<td>A Tourism-friendly Community Visit – Ulu Kelang Parliament Candidate</td>
</tr>
<tr>
<td>May</td>
<td>UPM Mock-cheque Presentation</td>
</tr>
<tr>
<td>May</td>
<td>Visit by the Secretary General of NRE</td>
</tr>
<tr>
<td>May</td>
<td>‘Zooliday’ - School Holiday Outreach Programme</td>
</tr>
<tr>
<td>June</td>
<td>Maybank Tiger Camp</td>
</tr>
<tr>
<td>June</td>
<td>Press Conference and MOU between Government of Malaysia and MZS</td>
</tr>
<tr>
<td>July</td>
<td>Audit of disabled-friendly facilities by MPAJ</td>
</tr>
<tr>
<td>July</td>
<td>Toyota Mock-cheque Presentation</td>
</tr>
<tr>
<td>August</td>
<td>Documentary on Giant Panda by FINAS</td>
</tr>
<tr>
<td>August</td>
<td>Hari Raya Celebration at Zoo Negara</td>
</tr>
<tr>
<td>Sep</td>
<td>Scope International CSR day</td>
</tr>
<tr>
<td>Sep</td>
<td>Sri KL Mock-cheque Presentation</td>
</tr>
<tr>
<td>Oct</td>
<td>Majalah Tiga filming of volunteer personnel</td>
</tr>
<tr>
<td>Nov</td>
<td>Cake-cutting for 50th Zoo Negara Anniversary</td>
</tr>
<tr>
<td>Nov</td>
<td>Puspakom Mock-cheque Presentation</td>
</tr>
<tr>
<td>Nov</td>
<td>MASkargo &amp; NRE Memorandum of Understanding</td>
</tr>
<tr>
<td>Nov</td>
<td>Visit by Deputy Minister of NRE</td>
</tr>
<tr>
<td>Nov</td>
<td>Visit from CEO of Wildlife Reserves Singapore</td>
</tr>
</tbody>
</table>
SPONSORSHIP & DONATION

The Department received a total of RM314,500.00 from sponsorship and RM64,230.65 from donations. New sponsors for the year include Conocophilips, Puspakom and Toyota-Tsusho. Among our long serving donors special mention must be made of Gardenia Bakeries (KL) Sdn. Bhd. who has been supporting us with bread (animal consumption) for more than 30 years.

Revenue comparison between year 2012 and 2013:

<table>
<thead>
<tr>
<th>Revenue</th>
<th>2012 (RM)</th>
<th>2013 (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filming and Videography</td>
<td>7,140.00</td>
<td>12,407.00</td>
</tr>
<tr>
<td>Sponsorship</td>
<td>281,871.00</td>
<td>314,500.00</td>
</tr>
<tr>
<td>Donation</td>
<td>52,169.65</td>
<td>64,230.65</td>
</tr>
<tr>
<td>TOTAL</td>
<td>341,179.65</td>
<td>391,137.65</td>
</tr>
</tbody>
</table>
MEDIA

Despite a minimal Advertisement and Promotion (A&P) budget, the Department managed to publicize the zoo in 418 articles from various mainstream and alternative media. The highlight through broadcasting media was an animal adoption programme aired in a special segment of ‘Wanita Hari Ini’, TV3.

MARKETING AND PROMOTION

In June 2013, the Management has decided to officially engage Saujana Jutaria Sdn. Bhd. to be responsible for all marketing and promotion aspects of the zoo which include sponsorship proposals, publicity, travel agents and online ticketing.

Total sales revenue for 2013:

<table>
<thead>
<tr>
<th>Sales Revenue</th>
<th>Total (RM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Ticketing</td>
<td>77,617.30</td>
</tr>
<tr>
<td>Tour Agent Ticketing</td>
<td>11,592.75</td>
</tr>
<tr>
<td>Event Ticketing</td>
<td>68,820.70</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>158,030.75</strong></td>
</tr>
</tbody>
</table>
The Customer Service Department provides frontline services to meet customer’s need while visiting the zoo. Staff assisted in various visitor management such as zoo ticket wearing and scanning, delivering general information about Zoo Negara as well as providing wheelchair and umbrella rental services. Visitors can also seek for information and assistance for lost and found items or individuals during their visit at the zoo.

The Department compiled complaints and compliments for the improvement of the zoo and continued to highlight customer hospitality. In order to facilitate the middle-eastern visitors, the Department provided Arabic language signs around the zoo.

Besides visitor services, the Department also handled a total of 21 events at Zoo Negara this year. Most of the events consist of children and youth activities which includes ‘Zoo Explore’, Corporate Social Responsibility programmes, family days, birthdays and other events.

The “Zoo Negara Loyalty Card” programme continued to receive 598 members this year. The specially designed card entitles children from 3 – 12 years old to unlimited free entry annually and invitations to special events at the zoo.
EDUCATION

Zoo Negara Malaysia celebrated its 50th anniversary in 2013 and over the years remarkable successes have been achieved. In this year, the Education Department (EDU) has attained new milestones with the introduction of Zoo Camp and Docent programme launched in May and November, respectively. This adds colours to the on-going EDU-led programme such as the Zoo Discovery and Volunteer programme, whereby both has seen a steady increase in participation and support from various establishments.

Annually, EDU chooses a species of an endangered wildlife to be highlighted throughout the year. Events conducted within and outside the Zoo ground were streamlined to focus on getting to know the focal animal, offer immediate suggestions on ways public could help in preventing, if not slowing down, the continuous threats dawned upon them.

The Year of the Orangutan

2013 was the year to acknowledge the importance of Orangutan. Malaysia is home to the world’s largest arboreal ape that inhabits the rainforest of Borneo. The Orangutan is an important keystone species, playing similar roles to tigers in Peninsular Malaysia. However, Orangutans are losing the battle against its greatest threats in history; rapid deforestation for commercialisation. Public participation is urgently needed and support was achieved through exhibitions, seminars or educational events held to raise greater awareness on Orangutan conservation.

The year began with a seminar on ‘Conservation Genetics of the Malaysian Primates’, presented by Associate Professor Dr. Badrul Munir Md Zain from Universiti Kebangsaan Malaysia (UKM), a primatologist in the country. Among others, he said that Orangutan disperses a greater variety of plants’ seeds than any other species ensuring the forest flourished with a diversity of flora.

The plight to save the Orangutans continued with the celebration of the World Orangutan Day and Orangutan Awareness Week in August and November, respectively. The latter event was an exhibition themed as The Orangutan’s Diary held during school term breaks. Specific activities included Orangutan enrichment projects undertaken by visitors, fun-learning games, thumb-print pledges to save wild Orangutans and merchandise sales to raise funds for the welfare of Zoo Negara’s Orangutans.
‘KiDZoo’ Camp
The first ever camping activity within Zoo Negara’s compound was held in May involving 20 children from Pertubuhan Belia Budiman Putrajaya. Using the Tunku Abdul Rahman Aquarium as the camp ground, the two-day programme covered topics on nature appreciation and wildlife conservation in-line with some great life lessons on self-confidence and responsibility. We would like to congratulate the programme coordinators, Mr. Hafidz Rahmat and his team for a successful event.

Zoo-Tiger Camp
Following the success of ‘KiDZoo’ Camp, another camping programme was organised in June taken part by more than 130 primary students from five rural schools, in collaboration with Maybank Foundation. The camp emphasised on instilling love and care for wildlife among students and to enlighten them that no action is too small to make a huge difference to save wildlife and environment.

Students were introduced to animal enrichment activity, whereby they were required to make enrichment products for selected animals. This activity challenged them to work together in a team and further develop their decision-making skills. Later, students observed the animals’ reaction to their enrichment tools. Prior to the much anticipated night walk, the campers set up their tent by the Main Entrance. The night walk offered participants the chance to ‘see in the dark’ using monocular night vision devices. The night concluded with a movie under the night sky.

Awareness through Volunteerism
The Corporate Social Responsibilities (CSR) programme was introduced for various learning institutions and corporate agencies to participate in maintaining the up-keep of exhibits through animal husbandry, landscaping and maintenance. To date, over 8,300 individual volunteers have contributed their time and energy.
‘Earthusiasm’ for Earth Day
Earth Day dawned upon Zoo Negara on the 21st April 2013, with the theme, ‘Earthusiasm’ to indulge on the importance of conserving and preserving our natural forests. The event was in partnership with several establishments, namely the Human and Nature Development Society (HANDS), Service Civil International (SCI), Scope International (M) Sdn Bhd and Green Team from International Islamic University of Malaysia (IIUM). Some 152 volunteers from these establishments joined hands to plant bamboo on selected sites within the zoo, clean up the Kemensah River that flows through the Zoo, maintain animal enclosures, raise funds via Zoo Green Jumble Sale and instill environmental awareness. As part of this event, several volunteers conducted a survey among visitors to identify the best practices to save the environment. Tree planting was ranked the highest. The event concluded with a successful fund raising effort whereby profit from sales was donated to the zoo’s animal welfare fund.

World Tiger Day
Celebrated in September each year, World Tiger Day serves as a constant reminder of the diminishing number of wild tigers. As one of the Tiger Range Countries (TRC), Malaysia must be more proactive in taking the necessary measures to protect its national icon from further demise. Showing their support, more than 100 volunteers from the Malayan Banking Berhad came together to conduct an exhibition on ‘Tigers in Danger’, promote the MYCAT Wildlife Crime Hotline (019-356 4194/report@malayantiger.net) and refurbish the big cats surrounding area.

CAPACITY BUILDING FOR ZOO STAFF AND VOLUNTEERS

Docent Programme
To commemorate Zoo Negara’s 50th Anniversary, EDU introduced the Docent programme. Selected students from the Faculty of Communication and Media Studies, Universiti Teknologi MARA were the pioneers to deliver wildlife information to visitors. Following the ‘Black and White’ theme, the chosen animals were Malayan Tapir, White Bengal Tiger, Zebra, Penguin and Giant Panda. Additionally, students performed a ‘flashmob’ at the Main Entrance and Show Amphitheatre.
Zoo Ranger Workshop
A tour guide workshop participated by 30 Zoo Rangers was held in June. This refresher course is recognised by educators from All Malaysian Zoos Educators (AMAZeD). EDU staff introduced the Tilden’s Principles of Interpretation, and shared their experiences on visitor management. Participants actively engaged in the activities, generated ideas and developed necessary skills to interact effectively with visitors.

Seminars, Workshops and Outreach Programmes
Zoo Negara encourages its staff to participate in in-door talks as well as reaching out to public beyond the Zoo wall which enables knowledge exchange and acquiring new perspectives. Activities conducted were:

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>21st Jan</td>
<td>Seminar on ‘Conservation Genetics of Malaysian Primates’</td>
<td>Tunku Abdul Rahman Theatre</td>
</tr>
<tr>
<td>14th Feb</td>
<td>Workshop on Reptile Restraint – False Gharial</td>
<td>Reptile House</td>
</tr>
<tr>
<td>21st Mar</td>
<td>Orientation Training Workshop</td>
<td>Kancil Classroom</td>
</tr>
<tr>
<td>26th Apr</td>
<td>‘English Week’ Outreach Programme</td>
<td>SK Pengkalan Tentera Darat</td>
</tr>
<tr>
<td>24th May to 9th Jun</td>
<td>‘Zooliday’ - School Holiday Outreach Programme</td>
<td>KL Festival City, Setapak</td>
</tr>
<tr>
<td>29th Jul</td>
<td>Seminar on ‘Zoo Internship Mini Projects’</td>
<td>Tunku Abdul Rahman Theatre</td>
</tr>
<tr>
<td>5th Aug</td>
<td>Seminar on ‘Zoo Animal Nutrition’</td>
<td>Tunku Abdul Rahman Theatre</td>
</tr>
<tr>
<td>14th and 20th Sept</td>
<td>Seminar on ‘Giant Panda Complex Operation Procedures’</td>
<td>Tunku Abdul Rahman Theatre</td>
</tr>
<tr>
<td>12th Oct</td>
<td>‘School Carnival’ Outreach Programme</td>
<td>SK Taman Seri Rampai</td>
</tr>
<tr>
<td>9th Nov</td>
<td>‘Two Decade Carnival’ Outreach Programme</td>
<td>SK Taman Melawati (2)</td>
</tr>
<tr>
<td>3rd Dec</td>
<td>‘Science Festival 2013’ Outreach Programme</td>
<td>National Science Centre</td>
</tr>
<tr>
<td>18th Dec</td>
<td>Orangutan Seminar: 1) ‘Evolutionary History of Orangutan: Wisdom of Teeth and Bone’ 2) ‘Eye Tracking on Sumatran Orangutan’</td>
<td>Tunku Abdul Rahman Theatre</td>
</tr>
</tbody>
</table>
Zoo Negara continued to accept internship and research requests from various educational institutions. This year, a total of 100 trainees registered while another 32 students conducted research as part of their academic requirement. The topics covered were:

1. A System Utilizing Smart Phone and Quick Response (QR) Code for Accessing Information about Animals in the Zoo
2. Visitors’ Perception of Malaysian Zoos
3. A Preliminary Study of Normal Flora on Female Reproductive Tract of Captive False Gharial
5. Antibacterial Properties of Serum from captive False Gharial
6. Promotion of Zoo Negara
7. A Study on the Awareness of *Salmonellosis* among Zoo Negara’s Reptile Section’s staff
8. A Gallery on Tapir
9. An Experiment to Investigate the Motion and Force of A Live Snake
10. The Making of Educational Visit at Zoo Negara
11. How Zookeepers Handle and Transport Food to Be Fed to Animal Routinely, Consistently and Efficiently
12. Internal Parasites in Malayan Tapir
13. Marketing Audit
14. Visitors Perception Towards the Ecotourism and Species Conservation at Zoo Negara
15. Zoo Negara : Extinction of Fauna
16. Visitors’ Perception towards Animal Welfare
17. Inter-cultural Communication Strategies
18. Enrichment Activities of Captive Pademelon
19. Observation on Gibbons
20. Business Etiquette Management
21. Zoo Negara Attraction and Management
22. Animal Behavior
23. Job Scope on Public Relation
24. Interactive Kiosk for Giant Panda Complex
25. Cross Species Amplification of *Tapirus indicus* microsatellite Loci using Noninvasive Samples
26. Sustainable Development
27. A Learning Package for ADHD Children: Discover Animal using Augmented Reality Technology
28. Visitors’ Knowledge towards Exhibit
29. The Current State and Public Perception
30. News Report
ACKNOWLEDGEMENT

A million thanks to all the staff involved in our programmes, volunteers, trainees, teachers, parents and students who took part in our activities throughout the year.

**Orangutan Awareness Events**
Hornbill Conservation Network, Persatuan Warisan Sarawak (Kuala Lumpur & Selangor) and Animal Projects & Environmental Education (APE) Malaysia.

**Earth Day**
HANDS generously donated bamboo plants.

**Tiger Day**
The Department would like to thank all those dedicated volunteers, Maybank staff and Malaysian Conservation Alliance for Tigers (MYCAT) for their numerous contribution and support.

**Discovery Programme**
EDU would like to thank the following organizations for their participation in the Zoo Discovery Programme:
A.L.I.M Kids, Australia International School Malaysia, Children Islamic Centre, Faculty of Applied Science (Universiti Teknologi MARA, Shah Alam), Faculty of Dentistry (International Islamic University of Malaysia, Kuantan Campus), Frontier Learning Center, Garden International School, Itqan Montessori Preschool, Malaysian Homeschool Network, Mont Kiara International School, Nobel International School, Rentokil – Initial (M) Sdn. Bhd., Scape Personal Development, School of Psycholog (University of Nottingham Malaysia), Smart Readers Bukit Keramat and Universiti Sains Islam Malaysia.
The Zoology Department continues to address animal welfare issues, upgrading of exhibits and implement best husbandry practices. In addition to that, the Department was involved in acquiring new species through international networking via exchange programmes.

### EXCHANGE PROGRAMMES

<table>
<thead>
<tr>
<th>No.</th>
<th>In</th>
<th>Out</th>
<th>Exchange with</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2.2.0 Black &amp; White Ruffed Lemur <em>(Varecia variegata)</em></td>
<td>1.1.0 Indian Gaur <em>(Bos gaurus gaurus)</em></td>
<td>Le Thanh Than Zoo, Vietnam</td>
</tr>
<tr>
<td>2.</td>
<td>1.2.0 White Bengal Tiger <em>(Panthera tigris tigris)</em></td>
<td>1.2.0 Reticulated Giraffe <em>(Giraffa camelopardalis)</em></td>
<td>Indira Gandhi Zoological Park, India</td>
</tr>
<tr>
<td>3.</td>
<td>0.1.0 Serval Cat <em>(Leptailurus serval)</em></td>
<td>1.1.0 Asian Small-clawed Otter <em>(Aonyx cinerea)</em></td>
<td>iZoo, Shizuoka, Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.1.0 Leopard Cat <em>(Prionailurus bengalensis)</em></td>
<td></td>
</tr>
</tbody>
</table>
CONSERVATION RELEASE PROGRAMME

Reintroduction of Milky Stork (*Mycteria cinerea*) into the wild in collaboration with the Department of Wildlife and National Parks (DWNP) is an ongoing project at Kuala Gula Bird Sanctuary, Perak.

No. of birds released from 2007 – 2013:

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Bird</td>
<td>5.5.0</td>
<td>3.5.0</td>
<td>3.4.3</td>
<td>2.3.0</td>
<td>3.2.0</td>
<td>3.2.0</td>
<td>5.5.0</td>
</tr>
</tbody>
</table>

*Key:*

1.1.0 : 1 male . 1 female . 0 unknown

Significant birth of the year:

Mammals

<table>
<thead>
<tr>
<th>No.</th>
<th>Common Name</th>
<th>Species</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ankole Cattle</td>
<td><em>Bos taurus</em></td>
<td>1.0.0</td>
</tr>
<tr>
<td>2.</td>
<td>Asiatic Brush Tailed Porcupine</td>
<td><em>Atherurus macrurus</em></td>
<td>0.1.0</td>
</tr>
<tr>
<td>3.</td>
<td>Banteng</td>
<td><em>Bos javanicus</em></td>
<td>1.1.0</td>
</tr>
<tr>
<td>4.</td>
<td>Binturong</td>
<td><em>Arctictis binturong</em></td>
<td>2.2.0</td>
</tr>
<tr>
<td>5.</td>
<td>Flying Fox</td>
<td><em>Pteropus vampyrus</em></td>
<td>0.0.1</td>
</tr>
<tr>
<td>6.</td>
<td>Giraffe</td>
<td><em>Giraffa camelopardalis</em></td>
<td>2.2.0</td>
</tr>
<tr>
<td>7.</td>
<td>Hog Deer</td>
<td><em>Axis porcinus</em></td>
<td>2.4.0</td>
</tr>
<tr>
<td>8.</td>
<td>Indian Gaur</td>
<td><em>Bos gaurus gaurus</em></td>
<td>0.1.0</td>
</tr>
<tr>
<td>9.</td>
<td>Javan Deer</td>
<td><em>Cervus timorensis</em></td>
<td>4.3.0</td>
</tr>
<tr>
<td>10.</td>
<td>Lesser Mousedeer</td>
<td><em>Tragulus javanicus</em></td>
<td>0.0.2</td>
</tr>
<tr>
<td>11.</td>
<td>Malayan Porcupine</td>
<td><em>Hystrix brachyura</em></td>
<td>0.0.3</td>
</tr>
<tr>
<td>12.</td>
<td>Red Legged Pademelon</td>
<td><em>Thylologale stagnatica</em></td>
<td>0.0.3</td>
</tr>
<tr>
<td>13.</td>
<td>Red Lechwe</td>
<td><em>Kobus leche leche</em></td>
<td>2.0.0</td>
</tr>
<tr>
<td>14.</td>
<td>Sambar Deer</td>
<td><em>Cervus unicolor equines</em></td>
<td>1.0.0</td>
</tr>
<tr>
<td>15.</td>
<td>Small Clawed Otter</td>
<td><em>Aonyx cinerea</em></td>
<td>1.1.2</td>
</tr>
<tr>
<td>16.</td>
<td>Striped Hyeana</td>
<td><em>Hyeana hyeana</em></td>
<td>3.1.1</td>
</tr>
<tr>
<td>17.</td>
<td>Spotted Deer</td>
<td><em>Axis axis</em></td>
<td>3.5.0</td>
</tr>
<tr>
<td>18.</td>
<td>Swamp Deer</td>
<td><em>Recervus duvaucelli</em></td>
<td>1.2.0</td>
</tr>
<tr>
<td>19.</td>
<td>Puma</td>
<td><em>Profelis concolor</em></td>
<td>0.3.0</td>
</tr>
</tbody>
</table>
The upgrading and remediation project of Tunku Abdul Rahman Lake by NAHRIM enabled the aquarium staff to obtain some species of fish from the lake. Among the species collected were Silver Shark Minnow (Osteochilus hasselti), Common Knifefish (Notopterus notopterus), Javanese Carp (Puntius gonionotus), Japanese Carp (Cyprinus carpio), Marble Goby (Oxyeleotris marmorata) and Hoven’s Carp (Leptobarbus hoevenii). One of the collected species, Jullien’s Golden Carb (Probarbus jullienii) was classified as endangered species by the IUCN Red List of Threatened Species.

**ENRICHMENT ACTIVITY**

The Zoology Department continues to carry out enrichment activities for various animals within the zoo. These activities help animals in providing a stimulating environment for them to demonstrate their species-typical behavior. It also allows them to exercise control or choice over their surroundings and enhance their well-being.

The Department carried out such planned activities on a regular basis with the help of various groups including volunteers, students and staff of other Departments.
On 23rd April 2013, three staff participated in 6th MAZPA Conference at A’ Famosa Resort, Malacca. Four papers entitled “Enrichment at Bear Section”, “Hand Raising of Baby Giraffe”, “Measurement Technique for Juvenile African Dwarf Crocodile” and “Hand Raising of Juvenile White Crested Cockatoo” were presented by Mohd Hisham Ahmad, Mohd. Hamdan Abdul Hamid and Nur Shahidin Ishak, respectively.

Dr Muhammad Danial Felix, Doreen Khoo, Ahmad Nizam Zainudin, Akmal Hadi Samsuddin, Mohamed Fitri Mohamed Yussoff, Edie Azwar Abdullah and Azrennizam Ibrahim attended training on husbandry and management of Giant Panda in River Safari, Singapore, Chiang Mai Zoo, Thailand and Ya’an Bifengxia Panda Base, China.

The Department was also involved in various events such as World Frog Day, World Tapir Day, World Tiger Day, KL Festival City exhibition, educational programme and filming.
The main function of the Hospital & Veterinary Services (HVS) is to provide comprehensive health care for zoo animals.

The HVS welcomed two new veterinarians, Dr Kavitha Jayaseelan and Dr Zahidah Izzati Zeid. They are assisted by Mustaza Syirin Mustafa and Christopher Caine Xavier.

**ANIMAL CARE**

From the smallest bird to the biggest mammal, the Department strives to provide good health care for all the zoo's animals. As a team, the HVS endeavour to improve the treatment practices for the zoo animals. Consequently, new equipments are purchased from time to time to gradually upgrade the hospital. The Department believe that the foundation of good health care is preventive medicine, proper nutrition and excellent husbandry management.

There were a few interesting cases encountered by the veterinarians this year. Amongst them included a surgical removal of mammary gland tumour from a Malayan Sun Bear (*Helarctos malayanus*) and a unilateral sub spectacular abscess in a Yellow Ringed Cat Snake (*Boiga dendrophila*). There were also multiple cases of cutaneous myiasis in a few ungulates such as the Ankole Cattle (*Bos taurus*) and the Javan Deer (*Cervus timorensis*). Apart from treating these animals, HVS also advises the Zoology Department on various preventive husbandry practises.

There were 60 animals that were put under anaesthesia this year. This was mainly done for wound treatment, minor surgeries, translocation and sample collection for further diagnostic investigation.

**LABORATORY WORK**

1550 animals' faecal samples were screened at the hospital for parasites this year. Animals that were found to be burdened with endoparasites such as *Strongyles sp.* and *Toxocara sp.* were treated with anthelmintics.

Some specimens were also sent to Universiti Putra Malaysia Veterinary Service Laboratory Unit for further diagnostic. These include blood samples that were sent for haematology and serum biochemistry and organ samples for histopathology and bacteriology.
IDENTIFICATION

Since its implementation several years ago, a total of 458 animals have been inserted with microchips. This method of identification is in accordance with the Wildlife Conservation Act 2010.

PREVENTIVE MEDICINE

Prevention is the main focus in all Zoos worldwide which includes good husbandry, vaccination and deworming programmes. There were 55 animals that received either annual or booster vaccinations this year. The Feline vaccine offers protection against Feline Rhinotracheitis, Feline Calicivirus, Feline Panleukopenia Virus and Chlamydia Psittaci while the Canine vaccine protects against Canine Distemper Virus, Canine Adenovirus Type 2, Canine Parainfluenza and Canine Parvovirus.

- Table of Preventive Medicine
- Table of Predator and Pest
- Graph of Mortality Record
- Table of Mortality Rate
## Preventive Medicine Programmes by HVS

<table>
<thead>
<tr>
<th>Preventive Programme</th>
<th>Species</th>
<th>Frequency</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deworming</strong></td>
<td>All species</td>
<td>As needed</td>
<td>Deworming in February, March, April &amp; November</td>
</tr>
<tr>
<td><strong>Disease Screening</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Feline Leukaemia Virus (FeLV Ag)</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>b) Feline Immunodeficiency Virus (FIV Ab)</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>c) Feline Infectious Peritonitis Virus (FIP Ab)</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>d) Feline Toxoplasma gondii IgM</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>e) Feline Toxoplasma gondii IgG</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>g) Ehrlichia canis Ab</td>
<td>Feline</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>h) Canine Heartworm Ag</td>
<td>Mixed</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>i) Avian Influenza</td>
<td>Avian</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>j) Tuberculosis</td>
<td>Mixed</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>k) Leptospirosis</td>
<td>Mixed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>l) Hepatitis B</td>
<td>Mixed</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>m) Salmonella</td>
<td>Mixed</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>Blood Parasite</strong></td>
<td>All Species</td>
<td>As needed</td>
<td>3</td>
</tr>
<tr>
<td><strong>Faecal Analysis</strong></td>
<td>All Species</td>
<td>Monthly</td>
<td>1573</td>
</tr>
<tr>
<td><strong>Heartworm Prevention</strong></td>
<td>Hyaenids, Procyonids, Otariids</td>
<td>Monthly</td>
<td>252</td>
</tr>
<tr>
<td><strong>Vaccination</strong></td>
<td>Felids, Viverrids, Procyonids, Hyaenids</td>
<td>Annually/Booster</td>
<td>61</td>
</tr>
<tr>
<td><strong>Predator Control</strong></td>
<td>Various Species</td>
<td>Daily</td>
<td>808</td>
</tr>
</tbody>
</table>
The mortality rate for this year was reduced to 2.62% as compared to 3.62% last year. This brings to about 131 deaths. The common causes of death amongst the animals include traumatic injuries, foreign body obstructions, old age and bacterial infections. All carcases would undergo post mortem examination to record lesions and to collect samples to identify the cause of death.

MORTALITY RATE 2011-2013

<table>
<thead>
<tr>
<th>YEAR</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (%)</td>
<td>4.0</td>
<td>3.62</td>
<td>2.62</td>
</tr>
</tbody>
</table>
This year has been a challenging one for the Department. After the announcement that a pair of Giant Pandas was going to be housed at Zoo Negara, our work has mainly been focused on the sourcing and planting of bamboos for these Giant Pandas. Additionally, the Department has continued to upgrade the zoo’s landscapes.

**BAMBOO PLANTING**

Planting six bamboos species around the zoo with resources and technical support from Forest Research Institute of Malaysia (FRIM). The bamboos species are, *Bambusa multiplex* (Buluh Pagar), *Bambusa vulgaris f. waminii* (Buluh Botol), *Dendrocalamus asper* (Buluh Betong), *Gigantochloa albociliata* (Buluh Madu), *Thyrsostachys siamensis* (Buluh Siam) and *Bambusa heterostachya* (Buluh Galah).
On 15th April 2013, ‘Majlis Gotong-Royong Penanaman Buluh’ was held in Zoo Negara. It was a collaboration between Zoo Negara and FRIM. The event was attended by Y. Bhg. Dato’ Sri Zoal Azha bin Yusof, Secretary General, Ministry of Natural Resources and Environment, Director-General FRIM, Y. Bhg. Dato’ Dr. Abdul Latif Mohmod, Acting President of Malaysian Zoological Society (MZS), Y. Bhg. Dato’ Sr. Zaharin Md. Arif, Vice Presidents of MZS, En. Rosly @ Rahmat Ahmat Lana and Y. Bhg. Dato’ Lau Yau Tian.

Y. Bhg. Dato’ Sri Zoal Azha bin Yusof, Secretary General, Ministry of Natural Resources and Environment planting ‘Buluh Siam’

From left, Y. Bhg. Dato’ Lau Yau Tian, En. Rosly @ Rahmat Ahmat Lana, Y. Bhg. Dato’ Sr. Zaharin Md. Arif and Y. Bhg. Dato’ Dr. Abdul Latif Mohmod
## BAMBOO SOURCING

<table>
<thead>
<tr>
<th>No.</th>
<th>Organisation</th>
<th>Species</th>
</tr>
</thead>
</table>
| 1.  | Paya Indah Wetlands, Dengkil, Selangor | *Bambusa multiplex* (Buluh Pagar)  
*Bambusa vulgaris f. waminii* (Buluh Botol)  
*Dendrocalamus asper* (Buluh Betong)  
*Gigantochloa albociliata* (Buluh Madu)  
*Thyrsostachys siamensis* (Buluh Siam) |
| 2.  | Bambooria Enterprise, Sg. Buloh, Selangor | *Dendrocalamus asper* (Buluh Betong) |
| 3.  | United Plantations Berhad (UPB)  
Kuala Bernam Estate, Perak | *Bambusa heterostachya* (Buluh Galah) |
| 4.  | Lanchang Edible Garden Taman Pertanian,  
Lanchang, Pahang | *Gigantochloa albociliata* (Buluh Madu) |

*Buluh Galah at Kuala Bernam Estate, Perak*  
*Discussion with the manager.*  
*From left: Tn. Haji Abdul Razak (FRIM), Dr. Mat Naim Ramli, Muhamad Ismail (Zoo Negara) and Kumaresan (UPB)*  
*Buluh Madu at Lanchang Edible Garden, Pahang*
Bamboo plantation located at Paya Indah Wetlands

Bulu Pagar and Buluh Madu plot at Paya Indah Wetlands

LANDSCAPE ACTIVITIES

Landscape by FRIM

Several locations within the zoo were re-landscaped and re-planted with colorful shrubs, climbers and creepers, orchid species and ground cover.
Landscapes along the way to Akuarium Tunku Abdul Rahman.

Special thanks to IJM Land Berhad for sponsoring the plants and the planting activity on 8\textsuperscript{th} December 2013. The plants were planted opposite of Savanna exhibit. These include \textit{Rhapis multifida}, \textit{Nephrolepis exaltata}, \textit{Ophiopogon jaburan} ‘Variegata’, \textit{Dianella ensifolia}, \textit{Calathea makoyana}, \textit{Alocasia macrorrhizos} and \textit{Dracaena} ‘Draco’.

Volunteers from IJM Land Berhad during planting

Besides re-landscaping the zoo, the Department has re-painted the garden benches and waste bins to make them more presentable.
### STAFF LIST AS AT 31ST DECEMBER 2013

<table>
<thead>
<tr>
<th>Staff Category</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td></td>
</tr>
<tr>
<td>Deputy Director (Admin)</td>
<td>Shahrin Binti Sharif</td>
</tr>
<tr>
<td>Deputy Director (Synergy)</td>
<td>Dr. Mohammad Faleh bin Abdulrah</td>
</tr>
<tr>
<td>Deputy Director (Hospital &amp; Vet. Ser.)</td>
<td>Dr. Mohd Naim bin Mohd Ramli</td>
</tr>
<tr>
<td>Head of Department</td>
<td></td>
</tr>
<tr>
<td>ADMINISTRATION</td>
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<tr>
<td>Human Resources</td>
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<tr>
<td>Head of Department</td>
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<td>INFORMATION TECHNOLOGY</td>
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<td>Head of Department</td>
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<td>ISO</td>
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<tr>
<td>Customer Services</td>
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<tr>
<td>Head of Department</td>
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<tr>
<td>HOSPITAL &amp; VETERINARY SERVICES</td>
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<tr>
<td>Veterinary</td>
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<tr>
<td>Executive</td>
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<tr>
<td>MAINTENANCE &amp; DEVELOPMENT</td>
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<tr>
<td>Executive</td>
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<tr>
<td>ZOOLOGY</td>
<td></td>
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<tr>
<td>Executive</td>
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</table>

**NOTE:** The above list includes names of staff as of 31st December 2013.
DONORS & SPONSORS

LIST OF SPONSOR

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Animal Sponsored</th>
<th>Amount (RM)</th>
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<tbody>
<tr>
<td>Maybank Foundation</td>
<td>Six Malayan Tigers</td>
<td>200,000.00</td>
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<tr>
<td>ConocoPhilips Malaysia</td>
<td>Orangutans</td>
<td>30,000.00</td>
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<tr>
<td>UPM (ENVOCH )</td>
<td>Great Hornbills</td>
<td>1,500.00</td>
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<tr>
<td>SRI KL School</td>
<td>Two Malayan Tigers &amp; One Mousedeer</td>
<td>40,000.00</td>
</tr>
<tr>
<td>Toyota-Tshu Sho</td>
<td>Two Red Legged Pademelons</td>
<td>5,000.00</td>
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<tr>
<td>Puspakom</td>
<td>One Red Legged Pademelon</td>
<td>2,500.00</td>
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<tr>
<td>Sri Garden School</td>
<td>One pair Rhinoceros Hornbill</td>
<td>3,500.00</td>
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<tr>
<td>TM Malaysia Sdn. Bhd.</td>
<td>Two Malayan Tapirs</td>
<td>32,000.00</td>
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<tr>
<td><strong>Total (RM)</strong></td>
<td></td>
<td><strong>314,500.00</strong></td>
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LIST OF DONORS

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<thead>
<tr>
<th>Name</th>
<th>Amount (RM)</th>
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<tr>
<td>GCH Retail (M) SdnBhd</td>
<td>32,244.00</td>
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<td>Petronas Leadership Center</td>
<td>669.00</td>
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<td>Yeoh Yee Hung</td>
<td>450.00</td>
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<td>Universiti Kuala Lumpur</td>
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<tr>
<td>Roselynza</td>
<td>1,300.00</td>
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<tr>
<td>UiTM (Faculty of Hotel and Tourism Management)</td>
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<tr>
<td>Aden Zackery Willoughby</td>
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<tr>
<td>Donation to Gibbon</td>
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<td>UiTM (Faculty of Business Management)</td>
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<td>Hope Green</td>
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<td>‘Zooliday’ - School Holiday Outreach Programme</td>
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<tr>
<td>S Ramesh a/l Subramaniam</td>
<td>5,000.00</td>
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<tr>
<td>Wong Heng Fei</td>
<td>5,000.00</td>
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<tr>
<td>INTAN</td>
<td>2,000.00</td>
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<td><strong>Total (RM)</strong></td>
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TV SHOOTING  RM 12,407.00

GRAND TOTAL OF SPONSORSHIP / DONATION  RM 391,137.65
## 2013 CENSUS

<table>
<thead>
<tr>
<th>CLASS</th>
<th>SPECIES</th>
<th>SPECIMEN</th>
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<tbody>
<tr>
<td>Mammals</td>
<td>71</td>
<td>499</td>
</tr>
<tr>
<td>Birds</td>
<td>81</td>
<td>1849</td>
</tr>
<tr>
<td>Reptiles</td>
<td>49</td>
<td>289</td>
</tr>
<tr>
<td>Fish</td>
<td>225</td>
<td>3715</td>
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<tr>
<td>Amphibian</td>
<td>12</td>
<td>32</td>
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<tr>
<td>Invertebrates</td>
<td>3</td>
<td>82</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>441</strong></td>
<td><strong>6466</strong></td>
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## 2012 CENSUS

<table>
<thead>
<tr>
<th>CLASS</th>
<th>SPECIES</th>
<th>SPECIMEN</th>
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<tbody>
<tr>
<td>Mammals</td>
<td>73</td>
<td>509</td>
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<tr>
<td>Birds</td>
<td>87</td>
<td>1712</td>
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<tr>
<td>Reptiles</td>
<td>52</td>
<td>325</td>
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<tr>
<td>Fish</td>
<td>237</td>
<td>3936</td>
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<tr>
<td>Amphibian</td>
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<td>110</td>
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<tr>
<td>Invertebrates</td>
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<td><strong>Total</strong></td>
<td><strong>472</strong></td>
<td><strong>6720</strong></td>
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## 2011 CENSUS

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<tr>
<th>CLASS</th>
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<tr>
<td>Mammals</td>
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<td>Birds</td>
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<tr>
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<td>3477</td>
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<tr>
<td>Amphibian</td>
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<td>147</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>496</strong></td>
<td><strong>6097</strong></td>
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</tbody>
</table>
### Mammals

#### Perissodactyla
- Macropodidae
  - Agile Wallaby
    - Macropus agilis
    - 2.1.2
  - Red-Legged Pademelon
    - Thylotagale stigmatic
    - 8.6.4
  - Sugar glider
    - Petaurus breviceps
    - 1.2.0

#### Chiroptera
- Pteropus spp.
  - Malayan Flying Fox
    - Pteropus vampyrus
    - 2.1.1

#### Pinnipedia
- Otariidae
  - Californian Sealion
    - Zalophus californianus
    - 2.1.0

### Carnivora
- Ursidae
  - Malayan Sun Bear
    - Helarctos malayanus
    - 2.5.0

### Rodentia
- Sciuridae
  - Prevost Squirrel
    - Callosciurus prevosti
    - 1.1.0

### Lagomorpha
- Leporidae
  - Old World Rabbit
    - Oryctolagus cuniculus
    - 6.11.11

### Primates
- Lemuridae
  - Black & White Ruffed Lemur
    - Varecia variegata
    - 2.2.0

### Cetacea
- Physeteridae
- Balaenopteridae
- Delphinidae

### Carnivora
- Pinnipedia
- Chiroptera
- Carnivora

### Artiodactyla
- Perissodactyla
- Cetacea
- Pinnipedia
- Chiroptera
- Carnivora
**BIRDS**

**STRUTHIONIFORMES**
- Ostrich
  - Struthio camelus: 2.4.0

**CASSIARIFORMES**
- Dromaiidae
  - Emu
    - Dromaius novaehollandiae: 4.5.11
  - Duck-Billed Cassowary
    - Casuarius casuarius: 1.1

**SPHENISCIFORMES**
- Spheniscus
  - Humbold Penguin
    - Spheniscus humboldti: 4.4.4

**PELECANIFORMES**
- Ardea
  - Little Heron
    - Butorides virescens: 2.2.3
  - Black Crowned Night Heron
    - Nycticorax nycticorax: 25.30.169
  - Cattle Egret
    - Bubulcus ibis: 1.1.1

**CICONIIFORMES**
- Ardea
  - Grey Heron
    - Ardea cinerea: 0.0.5
  - Painted Stork
    - Mycteria leucocephala: 2.2.3
  - Open-billed Stork
    - Mycteria rorabachii: 0.0.52
  - Scarlet Ibis
    - Eudocimus ruber: 2.1.11

**PASSERIFORMES**
- Alaudidae
  - Black Swallow
    - Riparia riparia: 1.3.2

**FALCONIFORMES**
- Accipitridae
  - Red Kite
    - Milvus milvus: 6.3.0
  - Bearded Vulture
    - Gypaetus barbatus: 6.6.0

**COLUMBIFORMES**
- Columbidae
  - Nicobar Pigeon
    - Caloenas nicobarica: 4.3.1
  - Rock Dove
    - Columba livia: 0.0.59
  - Green Imperial Pigeon
    - Ducula aenea: 0.0.2
  - Pied Imperial Pigeon
    - Ducula bicolor: 1.1.4
  - Zebra-headed Dove
    - Geopelia striata: 0.0.2
  - Pink-Necked Green Pigeon
    - Treron vernans: 3.3.1

**LOREDE**
- Lorikeet
  - Chattering Lory
    - Doliornis garnettii: 0.0.1
  - Red-browed Lory
    - Lory pyrrhopterus: 0.0.1

**CORACIIFORMES**
- Ferruginous Parakeet
  - Aratinga jandaya: 2.0.2

**CUCULIFORMES**
- Cuculus cuculus
  - Cuckoo
    - Cuculus canorus: 3.0.0

**COLUMBIFORMES**
- Columbidae
  - Pigeon
    - Columba livia: 0.0.59
  - Fantail Pigeon
    - Columba fasciata: 0.0.59

**COLUMBIFORMES**
- Columbidae
  - Ring-necked Pigeon
    - Streptopelia risoria: 0.0.1
  - Coal Pigeon
    - Streptopelia decaocto: 2.0.2

**PELICANIFORMES**
- Ardea
  - Western Grebe
    - Aechmophorus occidentalis: 1.0.1
  - Black Skimmer
    - Rynchops niger: 0.0.21

**CICONIIFORMES**
- Ardeidae
  - Purple Heron
    - Ardea purpurea: 0.0.3

**COLUMBIFORMES**
- Columbidae
  - Quail
    - Coturnix coturnix: 1.0.0
  - Sand Plover
    - Charadrius alexandrinus: 4.3.1
CENSUS

REPTILES

CHITONIODRA

Snake Neck Turtle Chelodina oblonga 0.1
Malama Chelus finsiniatus 0.1

Emydidae cryptodora

River Terrapin/Turtle Batagur baska 1.0
Malayan Box-Turtle Cuora ambonensis 19.17.10
Asian Leaf Turtle Cyclanorbis dentata 0.1
Big-Headed/Malaysian Giant Turtle Chelus fimbriatus 0.1
Asian Giant Tortoise Cuora amboinensis 19.17.10

EMYDIDAE

Chinese Softshelled Turtle Pelodiscus sinensis 0.0.1

COCCYDURA

Crocodyliformes Crocodylinae

Estuarine Crocodile Crocodylus porosus 1.4.0
Siamese crocodile Crocodylus siamensis 0.1.1
Dwarf Crocodile Osteolaemus tetraspis 2.3.5
False Gavial Tomistoma schlegelii 5.3.0
Spectacled Crocodile Caiman crocodilus 1.1.0

SAURIA

Agamidae

Frilled Lizard Chlamydosaurus kingii 0.0.0

Iguanidae

Malayan Water Monitor Varanus salvator 1.1.0
Clouded Monitor Varanus bengalensis 1.1.0

SERPENTES

Boidae

Green Anaconda Eunectes murinus 0.0.1
Yellow Anaconda Eunectes notaeus 0.0.1

ELAPIDAE

-centaurs

Cobra Naja kaouthia 1.1.0
Central Asian/Afganistan Cobra Naja naja 1.0.0

Variety of Cobra

Common Spitting Cobra Naja sumatrana 1.0.3
King Cobra Ophiophagus hannah 0.0.1

Viperidae crotalinae

Brown tree toad Pedostibes hossi 0.1.0
River toad Bufo asper 1.0.0
American Bull Frog Rana catesbeiana 2.2.0
Asian toad Bufo melanostictus 1.2.0

RHACHOPODEA

Golden tree frog Polypedates leucomystax 2.2.0
Wallace’s flying frog Rhacophorus nigropalmatus 0.1.0

Acrochordidae

Banded bull frog Kaloula pulchra 2.2.0

AMPHIBIAN

Catharidae

Paradise Tree Snake Chrysopelea paradisi 0.0.4
Oriental Whip Snake Ahaetulla prasina 0.0.3
Yellow-Ringed Cat Snake Boiga dendrophila melanota 0.0.1
Malayan Cave Racer Elaphe flavolineata 0.0.1
Cave Dwelling Racer Orthriophis taeniurus rileyi 0.0.3
Radiated Rat Snake Coelognathus radiata 0.0.3
Red-Tailed Rat Snake Gonyosoma oxycephalum 0.0.1
Keelied Rat Snake Ptyas carinatus 0.0.1
Dark-headed Cat Snake Boiga nigricans 0.0.1

ELAPIDAE

Monocellate Cobra Naja kaouthia 1.1.0
Central Asian/Afganistan Cobra Naja naja 1.0.0

Variety of Cobra

Common Spitting Cobra Naja sumatrana 1.0.3
King Cobra Ophiophagus hannah 0.0.1

Viperidae crotalinae

Brown tree toad Pedostibes hossi 0.1.0
River toad Bufo asper 1.0.0
American Bull Frog Rana catesbeiana 2.2.0
Asian toad Bufo melanostictus 1.2.0

SERPENTES

Elapidae

-centaurs

Cobra Naja kaouthia 1.1.0
Central Asian/Afganistan Cobra Naja naja 1.0.0

Variety of Cobra

Common Spitting Cobra Naja sumatrana 1.0.3
King Cobra Ophiophagus hannah 0.0.1

Viperidae crotalinae

Brown tree toad Pedostibes hossi 0.1.0
River toad Bufo asper 1.0.0
American Bull Frog Rana catesbeiana 2.2.0
Asian toad Bufo melanostictus 1.2.0

RHACHOPODEA

Golden tree frog Polypedates leucomystax 2.2.0
Wallace’s flying frog Rhacophorus nigropalmatus 0.1.0

Acrochordidae

Banded bull frog Kaloula pulchra 2.2.0
**FRESHWATER FISH (NATIVE SPECIES)**

- **Anabantoidea**
  - Ananas testudineus
  - Aplocheilichthys apogon
  - Crossocheilus siamensis
  - Boraras brigittae
  - Barbonymus schwanenfeldii
  - Osteochilus spilurus
  - Balantiocheilus melanopterus
  - Puntius kuchingensis
  - Danio choprai
  - Epalzeorhynchos kalopterus

- **Cypriniformes**
  - Betta coccina
  - Trichogaster trichopterus
  - Sphaerichthys osphronemenoides
  - Leiocassis micropogon
  - Leiocassis sp.
  - Bagrus sp.
  - Pelteobagrus sp.
  - Betta antoni
  - Betta hipposideros
  - Betta splendens
  - Betta pugnax
  - Trichopsis vittata
  - Channa marulioides
  - Betta enisae
  - Schistura vinciguerrae
  - Leiocassis sp.
  - Anabas testudineus
  - Gastromyzon spp.
  - Betta placa
  - Mystus planiceps
  - Mystus vittatus
  - Mystus micracanthus
  - Mystus micracanthus
  - Mystus micracanthus
  - Mystus vittatus
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**CENSUS**

**Tami River Rainbowfish**  | **Glossolepis incisus** | 0.0.2
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**Threadfin rainbowfish**  | **Ithiherina wernerii** | 0.0.2

**Poeciliidae**

**Clown Featherback/Belida Bintik**  | **Chitala ornata** | 0.0.2
**Royal knifefish /Belida**  | **Chitala blanci** | 0.0.2
**Common knifefish/ Potak**  | **Pristolepis notatus** | 0.0.10

**Osteoglossidae**

**Giant Gourami**  | **Osphronemus goramy** | 0.0.4
**Golden Giant Gourami**  | **Osphronemus goramy** | 0.0.4

**Nemacheilinae**

**Nemacheilus salangicus** | 0.0.1
**Tree Spot Gourami/Sepat Ronggeng** | 0.0.28
**Licorice gourami** | 0.0.4
**Banded Leaf Fish/Patung** | **Parasphronemus deissneri** | 0.0.2

**CERUSTEGRANS**

**Red chut chut snail**  | **Cerithidea obtusa** | 0.0.2
**Porcelain fidler crab**  | **Uca annulipes** | 0.0.15
**Banana Wood Shrimp**  | **Uca annulipes** | 0.0.15

**CRUSTACEANS**

**Monodactylidae**

**Dusky Gilled Mudskipper**  | **Monodactylus argenteus** | 0.0.1
**Big-eyed Squirrel Fish**  | **Promacentrus moluccensis** | 0.0.1
**Green Mandarinfish**  | **Amphiprion ocellaris** | 0.0.1
**Yellow Line Chromis**  | **Acanthochromis polyacanthus** | 0.0.1
**Clown Fish**  | **Amphiprion sebae** | 0.0.1
**Serranidae**

**Striped Redeye Puffer**  | **Carinotetradon salivator** | 0.0.1
**Tetraodon nigroviridis** | 0.0.1
**Stripped Redeye Puffer**  | **Carinotetradon irubesco** | 0.0.1
**Tetraodon sp.** | **Tetraodon palamentangens** | 0.0.1

**Tetraodontidae**

**Toxotidae**

**Lepisosteidae**

**Alligator Gar**  | **Lepisosteus spatula** | 0.0.1
**Teira Batfish/Tudung Periuk** | 0.0.1
**Atractosteus platostomus** | 0.0.4
**Atractosteus platostomus** | 0.0.28

**Loricariidae**

**Otocinclus alffinis** | 0.0.2
**Amphilophus citrinellus** | 0.0.2
**Myripristis sp.** | 0.0.2
**Amphiprion ocellaris** | 0.0.1
**Acanthochromis polyacanthus** | 0.0.1

**INVERTEBRATES**

**Banana Wood Shrimp**  | **Atyopsis molucensis** | 0.0.37
**Porcelain fidler crab**  | **Uca annulipes** | 0.0.15
**Rosy fidler crab**  | **Uca rosea** | 0.0.35
**Red chut chut snail**  | **Cerithidea obtusa** | 0.0.32
APPRECIATION

The Council wishes to place on record its appreciation and thanks to our president, Y. Bhg. Dato’ Sr. Zaharin Md. Arif and to all the vice-presidents, for their support, guidance and encouragement. The Council also takes this opportunity to record its appreciation and thanks to the following individuals, firms and organisations for their support and assistance.

The Federal Government
The Selangor State Government
Ministry of Natural Resources and Environment Malaysia
Ministry of Agriculture and Agro-Based Industry Malaysia
Ministry of Tourism and Culture Malaysia
Dewan Bandaraya Kuala Lumpur (DBKL)
Department of Wildlife and National Parks Peninsular Malaysia (DWNP)
Forest Research Institute of Malaysia (FRIM)
Department of National Hydraulic and Research Institute of Malaysia (NAHRIM)
Department of Irrigation and Drainage (DID)
Department of Fisheries Malaysia (DOFM)
Department of Veterinary Services (DVS)
National Respiratory Institute (NRI)
Institute of Medical Research (IMR)
Majlis Daerah Gombak (MDG)
Majlis Perbandaran Ampang Jaya (MPAJ)
Universiti Putra Malaysia (UPM)
Universiti Teknologi MARA (UiTM)
Universiti Malaya (UM)
Universiti Islam Antarabangsa Malaysia (UIAM)
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ASTRO
Polis Diraja Malaysia (PDRM)
World Association Zoos and Aquaria (WAZA)
South East Asian Zoos Association (SEAZA)
Malaysian Association of Zoos Parks and Aquaria (MAZPA)
Zoo Committee Members
Zoo Volunteers

The Council would like to thank all those individuals, organisations and well wishers too numerous to mention by name, for their help, encouragement and support.