



Animal Management

1. Animal Exhibition and Breeding

The Taipei Zoo centers on the exhibition of vertebrate animals, roughly 406 species represented totaling 2,706 in number. The number of animals bred under the Animals Breeding Program was 151 of 45 species in 2009. This year: successful breeding was seen for the first time in 3 animals of 3 species – South American Coati, Azara's Night Monkey and White Cockatoo; Endangered Species – Addax, Prezewalski's Horse, Ruffed Lemurs, Common Brown Lemurs, Siamang and White-handed Gibbons; Rare and Valuable Species – Pygmy Hippopotamus, Formosan Serows, Blue-fronted Amazon, Collard Scops Owls, Greater Flamingo, African Penguins, lions and Scarlet Ibis.

There were advancements and good results achieved on the breeding of native species as well, for instance one bear cub (male) was produced under the Formosan Black

Bear Conservation Breeding Program with Mr. Tengcheng Lee of Pingtung, a local farmer in Changzhi Township, Pingtung County. Born on December 30, 2008, the cub has returned to the Zoo after being weaned this year, and was named Hei-Tang (Brown Sugar) via a naming-balloting process.

2. Animal Health Care and Epidemic Prevention

In addition to daily medical care and emergency situations, health examinations for 330 animals were completed according to the annual plan. The zoo also conducted tuberculin tests, microchip implantations and vaccination. Other tests performed included 719 blood analysis tests, 1,852 feces and urine tests, and 1,038 X-ray exams and images for a total of 374 animals.

Collaboration with National Taiwan University Hospital – GongGuan Branch was reached for it to donate its old CT scanner to the Taipei Zoo. The scanner arrived on November 20, 2009. This machine is intended to assist in the training and development of top medical techniques for wildlife, via its cutting-edge technologies and experiences in human medicine, so as to improve the zoo's skills on Veterinary Diagnostic Imaging and to strengthen the accuracy of subsequent medical practices. Both animal welfare and the quality of medical care were sharply enhanced as the result. Species examined by this machine in the year – Jaguar, Black Leopard, Siberian Weasel, Clouded Leopard, Black Bear, Formosan Rock Macaque, Asian Small-Clawed Otter, Koala, African Lion and Orangutan.



Statistics of Animals

Category	Mammals		Birds		Reptiles		Amphibians		Fish		Total	
	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers
End of 2009	112	865	128	879	127	611	26	189	13	162	406	2706



斷層掃描儀醫療操作

A total of 124 animals were quarantined in 2009. These animals came from central agricultural organs and day-to-day confiscation of illegal possession of protected animals, those given to the Zoo by the general public, or from inter-zoo exchanges. Rescue services performed on 72 animals. Assurances were also given to local governments taking-in Pangolins, Muntjacs, Formosan Ferret-Badgers, and Formosan Blue Magpies. Numerous assurances were also provided to the Wild Bird Society of Taipei and the Taoyuan County Government treating injured birds as well as other mammals.

In terms of international veterinary seminars and exchanges, we dispatched veterinarians to the Ya'an Bifengxia Base of China Panda Protection and Research Center both in April and August, for training on artificial insemination and hand-feeding techniques of the Giant Pandas; in August we sent veterinarians to the annual convention of Asian Society of Zoo and Wildlife Medicine; and in October our veterinarians attended the annual conference of the American Association of Zoo Veterinarians.

3. Care for Protected Wild Animals

The Zoo's Wildlife Rescue Center is dedicated to take-in wild animals under conservation confiscated by conservation authorities due to smuggling, illegal hunting, selling and displaying. In 2009, we helped investigated 38 people, assisted with the handling of 134 animals of 17 species seized from the investigations and took them in. We are committed to continue assisting with the handling of wild animal rescue commissioned by county and municipal government agencies, and will keep on taking-in and adopting the many animals entrusted by authorities over the years including bears, big cats, birds

(parrots), primates, amphibians and reptiles, amounting to 886 animals representing 105 species. We also conducted professional animal rescue and adoption related seminars and educational services, and received a total of 288 people from 13 tour groups.

4. Introduction and Exchange of Animals

For purposes of renewing animal bloodlines and to enrich the efficacy of educational exhibits, the Taipei Zoo has engaged exchanges of animals, breeding programs, and gift-giving with other foreign and domestic zoos, and private individual breeders. New birds introduced: three individuals of three species. New mammals introduced: 14 animals representing eight species. Major results are as follows:

- Gifts to Hsinchu Zoo: Taipei Zoo presented the Hsinchu Zoo with two male and one female Ring-tailed Lemurs, two female Ruffed Lemurs, one male Dark-handed Gibbon, a pair of Chinchillas and one Reticulated Python.
- Exchange program with Leofoo Village Theme Park: Taipei Zoo used three male and two female Ruffed Lemurs, one pair of Brown Lemurs and one pair of Ring-tailed Lemurs in exchange for one male White Rhinoceros.
- Exchange program with Green World: Taipei Zoo used two male Common Squirrel Monkeys in exchange for one male Red-necked Wallaby and two male Malayan Porcupine.
- Exchange program with Ueno Zoological Gardens of Japan: Taipei Zoo exchanged-in one female Geoffroy's Spider Monkey.
- Introduction program with Tiergarten Nürnberg: Introduced one male Hyacinth Macaw from Germany.



- Gifts to Zoo Leipzig: Taipei Zoo presented the Zoo Leipzig with one female Formosan Pangolin.
- Gifts to Chang Da-Ch'ien Residence of National Palace Museum: Taipei Zoo presented the Residence with one male Common Crane and six Scarlet Ibis.
- Gifts to National Pingtung University of Science and Technology Innovation and Practical Training Center: Taipei Zoo presented the University with two male Muntjacs and two altered individuals.
- Gifts to Kaohsiung Shou Shan Zoo: Taipei Zoo presented Shou Shan with four female Muntjacs, two female Formosan Serows, one male Llama and one female Dromedary Camel.
- Collaboration project with Hualien Ocean Park for breeding and exhibition: Introduced one female Oriental Small-clawed Otter from the Park.
- Gifts from Kenting National Park Headquarters: Received two male and three female Formosan Sikas.
- Gifts from Endemic Species Research Institute: Received one Crab-eating Mongoose and two female Formosan Ferret-badgers.
- Gifts from Taipei County Government: Received one Rainbow Lorikeet and one Red-and Green Macaw.

5.Cooperation with Academia to Promote Animal Education

Taipei Zoo continues to work closely with the likes of Department of Veterinary Medicine of the National Taiwan University in animal clinical technique exchanges, maintaining a good cooperative relationship with the academia to construct a complete database on the cause of death of the animals in our zoo, which will to be used internally as materials pertinent to animal disease prevention and medical reference, as well as for veterinary students and interns to use for teaching and research purposes. In 2009, a total of 70 internship opportunities were provided to 716 NTU students for training in pathology.

Other cooperation and education promotions with related institutions are as follows: in January, we invited first-year medical students from the Taipei Medical University over for an education in medical ethics. This was an opportunity for

them to observe and learn about the value of beneficence by getting involved in the dedicated care the Taipei Zoo exemplifies. In June organized three sessions of "Professional Animal Capture and Immobilization Training Seminars" commissioned by the Council of Agriculture, and trained a total of 107 attendees representing agencies across the nation. In July we offered students and interns majoring in veterinary science and biology-related departments from domestic universities, as well as those in the International Migratory Bird Project an one-to-two months of internship, and a total of 72 students participated in the observation and learning of wildlife medical treatment, biology, and ecology. In October, Eva, a junior student majoring in Veterinary Science came to the Zoo for a six-week internship from Germany; and Nic, a fifth-year student majoring in Veterinary Science came to intern for two weeks on wildlife medical treatment; and we organized a training camp for 40 attendees from the Taipei City Fire Department about "Capture Animals in the Wild". In December we assisted the Taipei City Animal Protection Office – NeiHu Animal Shelter to organize a "Techniques Restraining Wild Animals, and How to Shoot a Dart and Tranquilizer Gun Training".

6.Promotion of Animal Adoption Project

The Animal Adoption was a project first launched in February of 2003, intended on providing the general public with opportunities to get closer to wild animals, get information about conservation, and to move the people into taking parts in conservative tasks. In addition, this project also aimed to band private forces to dedicate more powers in protecting animals, so could effectively assist the Taipei Zoo to launch various conservation educations and enhance animal welfare.

The accumulated private-individual adopters totaled 459 for the year (316 animal nannies and 143 animal treasurers) and there were 16 corporate adopters. On December 16, revised plans for the "Regulations on Taipei City Animal Adoption Project Operations", "Regulations on Taipei City Animal Adoption Project's Overseas Spending and Operations", as well as the "Regulations on Taipei City Animal Adoption Project's Implementation Operations" came into effect and were implemented. The number of applications for animal adoption accepted and approved in the year came to 29.





International Cooperation and Exchange

Promotional focuses on international cooperation and exchanges this year: Following the introduction of the Giant Pandas, Taipei Zoo directed efforts to the caring, feeding and breeding as well as practical training of breeding techniques of these animals, and actively participated in Giant Panda related international conferences. We took part in the international conservation and breeding of the Burmese Star Tortoise, and formed cooperation with the US-based Behler Chelonian Center by signing a turtle conservation pact. We also organized related professional seminars for expert exchanges on the global front too.

1.Participating in International Conferences:

In terms of international affairs exchanges, we continued to participate in zoo-related organizations, both regionally and globally. We kept up exchanges with famous zoos and organizations worldwide, sustained smooth channels on animal exchanges and research cooperation, personnel

training and technical exchanges too, so as to substantiate our international statute about animal know-how and animal diplomacy. In 2009, 28 zoo staffs attended 11 international conferences.

The Conservation Activities of Southeast Asian Zoo Association (SEAZA) currently mandates all its institutional ordinary members to be countries, whereas Taiwan and Hong Kong due to historic reasons have always been sustaining members. This year while attending the 17th SEAZA Annual Conference in Seoul, Korea, we encountered deliberate proposals designed to dwarf Taiwan's position, presumptuously intended to deprive Taiwan's sustaining member representation. The Taipei Zoo asserted strong oppositions, and vigorously defended Taiwan's membership status. During other meetings we also noticed that our data was entered incorrectly, which were finally corrected after active negotiation efforts by the Zoo.

■ Table of International Conferences Attended Overseas in 2009

Month	Conference Name	Number of Attendees
5	Traveled to the Netherlands to attend the International Conference on Diseases of Zoo and Wild Animals, and presented one thesis poster.	1
8	Traveled to Seoul to attend the SEAZA Annual Conference, and presented four thesis reports.	5
8	Traveled to Seoul to attend the ASWZM and presented three professional thesis reports.	3
9	Traveled to Beijing to attend the first "Academic Conference on Giant Panda Conservation and Education of the Cross-Straits Delta 2009", and presented three thesis reports.	5
9	Traveled to Hong Kong to attend the animal training seminar held at Ocean Park.	1
10	Traveled to St. Louis to attend the Annual Conference of the World Association of Zoos and Aquariums and the Annual Meeting of the Conservation Breeding Specialist Group.	1
10	Traveled to Oklahoma to attend the 2009 Annual Conference of the American Association of Zoo Veterinarians.	1
10	Traveled to Hong Kong to attend the 2 nd Asian Zoo Educators' Conference and presented three dissertations.	4
11	Traveled to Chengdu to attend the 19 th Annual Meeting of China Giant Panda Breeding and Technology and presented one thesis report.	2
11	Traveled to Penang Malaysia to attend the 9 th International Conference of Butterfly Exhibitors & Supplies, and presented one special topics report.	2
11	Traveled to the National Pingtung University of Science and Technology to attend the International Conference on Wildlife Rescuing in East and Southeast Asia held at, and made a speech.	3
Total	11 events	28 people



2.Observation Visits and Exchanges

The preservation of Giant Pandas has become a new task of critical importance. The Zoo sent personnel twice in the year to Sichuan for technical training on Giant Panda reproduction and maternal caring, hoping to breed this species in Taipei in the future. A total of 18 people attended six observation and exchange sessions in the year so as to improve our professional expertise on wildlife reproduction.

3.Organizing Professional Seminars

- In September we organized the “Burmese Star Tortoise - Reproduction and Conservation of the Geochelone Palmyra Conference”. A total of 133 people were in attendance, 13 research thesis reports presented, of which two were by the Zoo. During this time frame we also signed a “Conservation Cooperative Agreement for Endangered Turtle and Tortoise Species” with the US-based Behler Chelonian Center.
- In October we organized a Giant Panda Medical and Management Training Camp, and invited Senior Animal Behavioral Training Instructor Paul Wu from Ocean Park Hong Kong to Taipei Zoo to give speeches and seminars in this regard.
- In November we co-sponsored the “2009 International Symposium on Conservation of the Asiatic Black Bear” together with the Endemic Species Research Institute held inside the Special Exhibit House. This 250 people event, billed as the most important international symposium on the conservation and research works of the Asiatic Black Bear of the decade, had in attendance the chairman of IUCN/SSC Bear Specialist Group, and

professionals and scholars from 15 countries including Taiwan. A total of 31 oral presentations and 21 poster presentations with topics related to the conservation of the Asiatic Black Bears were given, of which two oral and one poster were presented by the Zoo.

- In November we organized the “Seminar on Demographic Management” and invited Senior Scientist Jonathan D. Ballou of the Smithsonian National Zoo and Dr. Kathy Traylor-Holzer, IUCN Conservation Breeding Specialist, to the Zoo to give lectures in this regard.

4.Others

We invited Dr. Tang Chunxiang, the Assistant Director and Chief Veterinarian of Ya'an Bifengxia Panda Base, to lecture on the diseases common to Giant Pandas, their reproductive physiology, and breeding via artificial insemination. Also Huang Zhi, Animal Preservation Official of the same base, was asked to lecture on the preservation, management, oestrus, breeding, caring of offspring and artificial rising of newborn of this species. We had Phil Ridges, Head Gorilla Keeper at Howletts & Port Lympne Wild Animal Parks, over to find out about the care Taipei Zoo provided to the Gorillas, and to introduce Howletts & Port Lympne Wild Animal Parks as well as speaking about the Gorilla management offered there. Dr. Lee, a veterinarian at the Ocean Park Hong Kong and his assistant Wendy came for visit and observation too. Professor Masako Izawa of the University of Ryukyus came and requested access to our research records on animal specimen; Singapore Zoo dispatched personnel over for observation, etc.

■ Table of Observation Visits and Exchanges Attended in 2009

Month	Event Name	Number of Attendees
3	Traveled to Ya'an Bifengxia Panda Base in Sichuan for technical training on the breeding and artificial insemination of the Giant Pandas	5
4	Traveled to Hong Kong and Yunnan to attend the “China Dinosaur Fossils Exhibition and Discourse about Dinosaur Fossils by Donation” activities.	1
8	Traveled to Ya'an Bifengxia Panda Base in Sichuan for observation and seminar on how Giant Panda gives birth and rears offspring.	3
8	Invited by Zoo Leipzig to accompany Pangolin “Gui Shan” over, and to exchange experiences about the medical and care-taking of Pangolins.	2
9	Traveled to Houcheng Xian in Xinjiang to assist with matters pertinent to the conservation of Central Asian Tortoise.	3
10	Traveled to the San Diego Zoo, Behler Chelonian Center, and Ashton Biodiversity Research and Preservation Institute to discuss about international conservation cooperation issues, and to collect specimen.	4
Total	6 events	18 people



Research and Development Projects

Research projects for year included 2 City Government annual projects and 8 Central Government commissioned projects. For the fiscal year 2008, out of the 7 City Government research projects and staff research projects awarded to the Taipei Zoo by the Taipei City Government, 2 were first prizes, 4 second prizes and 1 third prizes.

List of Taipei City Government Research Projects for Fiscal Year 2009

No.	Project Title	Executed By
1	Research on foraging and habitat choice of forest bats in Taipei Zoo (2 of 1)	Conservation and Research Center
2	Exploration on the reproductive behavior and habitat preference of <i>Lyriothemis flava</i> in Taipei Zoo (2 of 1)	Conservation and Research Center, Education Division

List of Central Government Commissioned (Funded) Projects for Fiscal Year 2009

No.	Subsidized Project Title	Funded By	Executed By
1	The business plan for Wild Animal Rescue Stations and Adoption Centers	Forest Bureau	Conservation and Research Center, Veterinary Division
2	The general plan for "Protected Wild Animal Rescue Stations and Adoption Centers of 2009"	Forest Bureau	Conservation and Research Center, Veterinary Division
3	The Wild Animal Product Morphology Identification Laboratory in Northern Taiwan and production of wildlife animal safety operation videos	Forest Bureau	Researcher Shih-Chien Chin , Conservation and Research Center
4	Taipei Zoo Rescue Center's International Cooperative Plan for the Rehabilitation of Endangered Species and the Reintroduction back to Original Habitats (fiscal year of 2009)	Forest Bureau	Conservation and Research Center
5	A study on the Relationship between the Diseases of Pets and Wild Animals and Human Lifestyle	Council of Agriculture	Veterinary Division
6	Living Science – Exploration of the Educational Promotion Plan in the Scientific Technologies and Developments of Taiwan's Insect and Butterfly Industries	National Science Council	Education Division



「瀕危龜類保育合作協定」簽署儀式



「從緬甸星龜的國際保育繁殖合作—談瀕危龜類的域內外保育連結行動」研議會（張明雄編審發表）