

## 動物保育與研究 Animal Conservation and Research



### ■ 動物經營管理 ■

#### 1. 動物飼養展示與繁殖

園區飼養展示之動物以脊椎動物為主，共約404種、2,554隻（未計算昆蟲、部分魚類及農委會收容計畫動物）。本年度內保育繁殖計畫成果，累計達41種、103隻動物個體，繁殖青鸞、白鳳頭鸚鵡、灰頸冠鶴、藍腹鵲、折衷鸚鵡、黑天鵝、黑腳企鵝、二趾樹獼、侏儒河馬、人猿、斑哥羚羊、無尾熊、非洲獅、長頸鹿、阿氏夜猴、紅猴、穿山甲、馬來獼猴、臺灣長鬃山羊、小懶猴、弓角羚羊、蒙古野馬、臺灣山羌、雙峰駱駝、馴化驢等珍貴動物。



區長與妞莉

■ 飼育動物數量統計表

時間	哺乳類		鳥類		爬蟲類		兩棲類		魚類		總計	
	種數	隻數	種數	隻數	種數	隻數	種數	隻數	種數	隻數	種數	隻數
101年底	114	887	125	805	128	609	26	202	11	51	404	2554



妞莉試吃蔬菜



舒服搖搖床

### ■ Animal Management and Administration ■

#### 1. Animal Breeding, Exhibition and Reproduction

Animals reared and exhibited in the Zoo are primarily vertebrates – 2,554 animals representing 404 species (excluding insects, some fish, and animals under the COA's shelter program). For the year, the number of animals bred under the Animals Conservation and Breeding Program reached 103 animals (41 species), including precious species such as Great Argus (*Argusianus argus*), White Cockatoo (*Cacatua alba*), Grey Crowned-Crane (*Balearica regulorum*), Swinhoe's Pheasant (*Lophura swinhoi*), Eclectus Parrot (*Eclectus roratus*), Black Swan (*Cygnus atratus*), Jackass Penguin (*Spheniscus demersus*), Linnaeus's Two-toed Sloth (*Choloepus didactylus*), Pygmy Hippopotamus (*Choeropsis liberiensis*), Bornean Orangutan (*Pongo pygmaeus*), Bongo (*Tragelaphus eurycerus*), Koala (*Phascolarctos cinereus*), Lion (*Panthera leo*), Giraffe (*Giraffa camelopardalis*), Azara's Night Monkey (*Aotus azarae*), Patas Monkey (*Erythrocebus patas*), Formosan Pangolin (*Manis pentadactyla pentadactyla*), Crab-eating Macaque (*Macaca fascicularis*), Formosan Serow (*Capricornis swinhoei*), Pygmy Slow Loris (*Nycticebus pygmaeus*), Addax (*Addax nasomaculatus*), Przewalski's Horse (*Equus*

*caballus przewalskii*), Formosan Reeve's Muntjac (*Muntiacus reevesi micrurus*), Bactrian Camel (*Camelus bactrianus*), and Domestic Donkey (*Equus asinus*).



煙雨自己走路到兒童區的新家



煙雨中途休息喝奶補充體力

■ Statistics of Animals

Category	Mammals		Birds		Reptiles		Amphibians		Fish		Total	
	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers
End of 2012	114	887	125	805	128	609	26	202	11	51	404	2554



## 2. 動物醫療保健及防疫

在動物醫療保健方面，除執行日常突發性之外傷及內科疾病治療外，依計畫進行動物的健康檢查及疾病監測預防等工作，並協助處理中央農政單位查緝沒入之保育類動物、國內民眾贈入及園際間交換的動物檢疫工作，計18隻；另救傷動物80隻，協助地方政府照顧收容穿山甲、水鹿、山羌、鼬獾和白鼻心等動物，以及多次協助臺北市鳥會和桃園縣政府治療救傷之鳥類及其他哺乳動物。

年內購置心電圖儀、移動式X光機及小動物氣體麻醉機等儀器設備，用於動物醫療及監測、老齡動物心臟疾病及幼年動物先天性心臟病診斷等，得以針對立即性及潛在性的心臟功能問題進行治療。並透過影像診斷及強化小動物氣體麻醉操作，得以提升動物的麻醉操作安全性及大動物疾病診斷準確率。

## 3. 保育類野生動物收容

本園野生動物收容中心專責收容保育主管機關查獲之走私與違法獵捕、販售與展示的保育類野生動物。本年度共計支援查緝13人次，其中協助處理查緝收容種類共9種、12隻，並持續協助各縣市政府

相關單位所委託處理之野生動物救傷，與持續照養歷年所委託收容之各類動物，包含熊科動物、大型貓科動物、鳥類（鸚鵡）、靈長類動物、兩棲爬蟲動物，計116種、833隻；又協助林務局辦理經濟部國貿局CITES列管物種出口繁殖能力查驗，共29個繁殖場；另提供收容動物專業技術研習與教育觀摩活動等解說導覽服務，導覽參觀計65個團體，共1,423人次，參訪與研習團體多為國內生物相關科系師生、地方保育主管機關，動物保護處、動植物防檢局、森林警察隊及來自大陸與全球的動物園等單位。

協助地方保育主管機關執行野生動物辨識、捕捉、保定等培訓課程，共26場次；並提供相關單位動物照顧飼養、動物福利提升、野生動物保育觀念與宣導等專業諮詢服務約37次。



金剛猩猩黑皮醫療



## 2. Animal Health Care and Epidemic Prevention

With respect to animal health care, and apart from the routine treatment, sudden traumatic injuries and internal illnesses, the Zoo also conducted health examination and disease monitoring and prevention on animals as planned and assisted in the quarantine of protected animals seized by central agricultural authorities, animals donated to the Zoo by the public and animals exchanged from other zoos -18 animals in total. Moreover, the Zoo rescued 80 injured animals, helped local governments taking care of animals like Formosan Pangolin (*Manis pentadactyla pentadactyla*), Formosan Sambar (*Rusa unicolor swinhoii*), Formosan Reeve's Muntjac (*Muntiacus reevesi micrurus*), Formosan Ferret-badger (*Melogale moschata subaurantiaca*), and Formosan Masked Palm Civet (*Paguma larvata taivana*) and assisted the Wild Bird Society of Taipei and the Taoyuan County Government on many occasions in treating injured birds and other mammals.

In 2012, the Zoo purchased an electrocardiograph, a portable X-ray machine, and a small animal anesthesia machine for use in the treatment and monitoring of animals and the diagnosis of aging animals with heart diseases and young animals with congenital heart diseases so that immediate and potential heart problems can be treated, as well as improving the safety of veterinary anesthesia and the accuracy of disease diagnosis of large animals through imaging diagnosis and the strengthening the anesthesia of small animals.

## 3. Shelter for Protected Wildlife

The Zoo's Wildlife Rescue Center is dedicated to taking in smuggled and illegally hunted, sold and exhibited protected wildlife that have been seized by competent conservation authorities. In 2012, the Wildlife Rescue Center helped investigate 13 people, having assisted in the handling of 12 animals of 9 species seized and taken in from the investigations, continued to help rescue injured wildlife for related units of county/city governments and kept on taking care of various animals taken in over the years,



大貓熊人工採授精

including bears, large felines, birds (parrots), primates, amphibians, and reptiles (833 individuals representing 116 species). We also assisted the Forestry Bureau in carrying out reproductive capability inspections on 29 breeding farms for species listed under the CITES of the Bureau of International Trade, MOEA were to be exported. Furthermore, we provided guided tour services for professional workshop and educational observation events concerning the rescue and shelter of animals – 65 groups and 1,423 participants in all. The visiting and studying groups were mostly faculty and students of biology-related departments in the country, local competent authorities in charge of conservation, Animal Protection Offices, the Bureau of Animal and Plant Health Inspection and Quarantine, the forest police force, and zoo delegations from China and around the world.

In addition, the Wildlife Rescue Center assisted local conservation authorities in holding training courses on identifying, capturing and immobilizing wild animals – a total of 26 sessions – and provided related units with professional consultation services on animal rearing and caring, animal welfare improvement, and wildlife conservation concepts and promotion – 37 times.



#### 4. 動物引進及交換

為更新動物血緣與增加教育展示效益，陸續與國內外動物園或照養機構進行動物繁殖合作、交換或互贈，計引進鳥類7種10隻、哺乳類9種15隻、爬蟲類3種7隻；並續與印度甘地動物園、大陸福州大貓熊研究中心、新加坡裕廊鳥園、維也納動物園、韓國首爾動物園及日本橫濱動物園、釧路市動物園、多摩動物園等洽談動物交流中。重要成果如下：

- 善牧畜牧場交換案：換入迷你馬1雄。
- 新加坡裕廊鳥園交換案：換出埃及聖環12隻。
- 維也納動物園交換案：換出卡羅萊納箱龜1雄2雌、換入歐洲澤龜3隻。
- 韓國首爾動物園交換案：換出蒙古野馬1雄。
- 日本上野動物園交換案：換出穿山甲1對。
- 基隆市政府拾獲轉贈入：戈芬氏鳳頭鸚鵡1隻。
- 南投集集特生中心贈與案：贈入臺灣山羌1雄。

- 臺北市動保處查緝沒入轉贈入：絨鼠1雄、遊隼1隻、鴛鴦1對、鼬獾1雌。
- 鳳凰谷鳥園交換案：換出青鸞2雄，換入青鸞2雄。(更新血緣)
- 新北市政府動物救傷中心贈與案：贈入紅冠水雞2隻。
- 民眾收容贈入案：黑尾草原犬鼠1雄、林八哥1隻、赤耳龜1隻。
- 臺北市防治所救傷主贈入：麝香貓1雄。
- 桃園縣政府救傷轉贈入：黃魚鴉1雄、臺灣山羌1雄。
- 太魯閣國家公園救傷轉贈入：臺灣獼猴1雄。
- 六福村野生動物園借殖案：借殖輸出南非劍羚1雄。
- 繁殖原生物種野放：蓋斑鬥魚25隻。
- 自加拿大購入河狸1雌、自澳洲購入沼林袋鼠1雄1雌、自新生馬場購入黑尾草原犬鼠1雄3雌。

#### 4. Introduction and Exchange of Animals

To renew animal bloodlines and to enhance the effectiveness of educational exhibitions, the Taipei Zoo has collaborated with other domestic and foreign zoos and private breeders in breeding programs, exchanges of animals and mutual donations of animals. In total, 10 birds of 7 species, 15 mammals of 9 species, and 7 reptiles of 3 species were introduced, and animal exchange negotiations with the Gandhi Zoological Park in India, the Fuzhou Giant Panda Research Center, the Jurong Bird Park in Singapore, the Vienna Zoo, the Seoul Zoo in South Korea, the Zoorasia Yokohama Zoological Gardens, the Kushiro Zoo, the Tama Zoological Park, and others are in progress. Significant results are as follows:

- Exchanged with the Shanmu Ranch: Swapped in 1 male Mini Horse (*Equus caballus ferus*).
- Exchanged with the Jurong Bird Park: Swapped out 12 Sacred Ibis (*Threskiornis aethiopicus*).
- Exchanged with the Vienna Zoo: Swapped out 1 male and 2 female Carolina Box Turtles (*Terrapene carolina*); swapped in 3 European Pond Turtles (*Emys orbicularis*).
- Exchanged with the Seoul Zoo: Swapped out 1 male Przewalski's Horse (*Equus caballus przewalskii*).
- Exchanged with the Ueno Zoological Gardens: Swapped out 1 pair of Formosan Pangolin (*Manis pentadactyla pentadactyla*).
- Found and donated by the Keelung City Government: Received 1 Goffin's Cockatoo (*Cacatua goffiniana*).
- Donation by the Endemic Species Research Institute in Jiji, Nantou County: Received 1 male Formosan Reeve's Muntjac (*Muntiacus reevesi micrurus*).
- Seized and donated by the Taipei City Animal Protection Office: Received 1 male Chinchilla (*Chinchilla lanigera*), 1 Peregrine Falcon (*Falco peregrinus*), 1 pair of Mandarin Ducks (*Aix galericula*), and 1 female Formosan Ferret-badger (*Melogale moschata subaurantiaca*).
- Exchanged with the Fonghuanggu Bird and Ecology Park: Swapped out 2 male Great Arguses (*Argusianus argus*) and swapped in 2 male Great



Arguses (*Argusianus argus*) (for bloodline renewal).

- Donation by the New Taipei City Animal Rescue Center: Received 2 Common Moorhens (*Gallinula chloropus*).
- Donation by the general public: Received 1 male Black-tailed Prairie Dog (*Cynomys ludovicianus*), 1 Jungle Myna (*Acridotheres fuscus*), and 1 Red-eared Slider (*Trachemys scripta elegans*).
- Donation by the owner of animal rescued by the Taipei City Animal Disease Control Center: Received 1 male Chinese Lesser Civet (*Viverricula indica pallida*).
- Rescued and donated by the Taoyuan County Government: Received 1 male Tawny Fish Owl (*Ketupa flavipes*) and 1 male Formosan Reeve's Muntjac (*Muntiacus reevesi micrurus*).
- Rescued and donated by the Taroko National Park: Received 1 male Formosan Macaque (*Macaca cyclopis*).
- Loaned to the Leefoo Village Safari Park for breeding: Lent out 1 male South African Oryx (*Oryx gazelle*) for breeding.
- Bred and released native species into the wild: Released 25 Paradise Fish (*Macropodus opercularis*).
- Purchased 1 female American Beaver (*Castor canadensis*) from Canada, 1 male and 1 female Red-legged Pademelons (*Thylogale stigmatica*) from Australia, and 1 male and 3 female Black-tailed Prairie Dogs (*Cynomys ludovicianus*) from the Xinsheng Horse Ranch.





## 5. 推展跨區域族群管理

主導全國各臺灣黑熊保育研究與飼育之公私立機構合作，展開跨區域族群管理之臺灣黑熊復育計畫。計國內16個動物園及保育機構6月26日於本園簽署「臺灣黑熊復育合作保育宣言」，首次為臺灣黑熊的保育攜手合作，並於12月實質開始進行動物的跨單位調度（行政院農業委員會特有生物研究保育中心【下稱特生中心】將其2隻黑熊個體調度至六福村野生動物園）。

## 6. 推動本園動物以血統書為依據之永續保育繁殖計畫

本園建立15個物種以上之血統書，並依此規劃永續族群之保育繁殖計畫，及相關動物保育繁殖合作，除推廣至臺灣地區動物園外，亦整合亞洲地區（日本、新加坡、香港、泰國、印尼）之動物園，凝聚亞洲區域性物種保育合作共識。



黑熊縱斷行保育記者會



## 5. Promotion of Cross-regional Population Management

The Zoo has guided the cooperation among public and private institutes committing to the conservation research and breeding of Formosan Black Bear (*Ursus thibetanus formosanus*) in the country, launching the Formosan Black Bear Restoration Program for cross-regional population management. Sixteen domestic zoos and conservation institutes signed the Conservation Declaration on the Cooperation for the Restoration of Formosan Black Bear at the Zoo on June 26, marking the first such cooperation for the conservation of Formosan Black Bear, and began to carry out the cross-organizational rearrangement of animals in December (The Endemic Species Research Institute (ESRI), Council of Agriculture sending 2 Formosan Black Bears to the Leofoo Village Safari Park).

## 6. Promotion of Pedigree-based Sustainable Conservation and Breeding Programs for the Zoo's Animals

The Zoo has established pedigrees for over 15 species and has drawn up conservation and breeding programs for sustainable populations and related animal conservation and breeding collaborations based on pedigrees. Besides promoting such effort to

other zoos in Taiwan, the Zoo has also integrated other zoos in the Asian region (Japan, Singapore, Hong Kong, Thailand, and Indonesia) to reach a cooperation consensus on the conservation of Asian species.



簽署保育臺灣黑熊宣言記者會





## 7. 展示場館更新暨開展— 金剛猩猩展示場

金剛猩猩展示場在經費與空間限制的挑戰下，結合創意及飼育經驗，針對金剛猩猩「寶寶」與「黑皮」生活的各個小細節，設計符合動物福祉之生活及展示場所，以及增加遊客貼近觀察金剛猩猩生活的可能性。「寶寶」和「黑皮」於3月30日入住新家。

## 8. 與學術界建教合作及推廣教育

續與臺灣大學等獸醫學院在動物診療技術方面，保持密切建教合作關係，助益本園對動物死亡的病

因，建立完整檔案，供作本園動物疾病預防及醫療參考，及作為獸醫系所學生實習及教學研究之用，並持續提供臺大學生來園進行病理實習。

另與其他相關機構建教合作及教育推廣，或提供國內獸醫師及國內外獸醫系大學生前來實習，包括：1月份澳洲雪梨大學學生1名；2月份臺灣大學學生2名，葡萄牙大學學生1名；5月份美國南加州大學學生1名；6-7月美國柏克萊大學學生1名；7-8月國內各大學獸醫學、生物相關、觀光遊憩管理等科系實習生計55人，候鳥計畫實習學生（來自美國及加拿大）計8人，進行為期1-2個月實習，提供學生野生動物醫療、生物學、生態學等觀摩學習；12月馬來西亞Nik Yusaimi、Dr. Zubaidah及Mdm Sugenah等10位專業人員（含獸醫）觀摩學習大貓熊飼養管理及軟硬體設施。

協助各單位辦理之演講及課程有：11月協助財團法人臺灣動物科技研究所辦理動物保護專業教育訓練—動物管制人員進階職能班，共2梯次。



## 7. Venue Renovation and Exhibition Opening – Gorilla Exhibition Area

The Gorilla Exhibition Area, faced with fund and space limitations, has incorporated creativity and breeding experience to design a living and exhibition place that ensures the well-being of animals, paying attention to all the small details in the daily lives of gorillas, “Pau Pau” and “Jeppe”, and to increase the possibility for visitors to closely observe the lives of gorillas. “Pau Pau” and “Jeppe” moved into their new home on March 30<sup>th</sup>.

## 8. Cooperation with the Academia to Promote Animal Education

The Taipei Zoo has continued to collaborate closely with veterinary schools, such as the School of Veterinary Medicine, National Taiwan University, in regard to animal diagnostic and treatment techniques, which has helped the Zoo to establish a complete archive of causes of death of animals in the Zoo for use as internal reference materials for animal disease prevention and medical treatment and for practicing, teaching and research purposes by veterinary students. We also have continued to provide pathological internships at the zoo for NTU students.

Moreover, the Zoo has continued educational cooperation and animal education promotion with other related institutions and has provided internship opportunities for veterinarians or veterinary students in



Taiwan and overseas. A University of Sydney student studied at the Zoo in January, two NTU students and one student from Portugal came in February, a University of Southern California student arrived in May, and a UC Berkeley student interned here between June and July. In July and August, 55 students from departments of veterinary medicine, biology-related departments, and tourism and leisure departments of universities in the country and 8 students for the Migratory Bird Program (from the US and Canada) interned at the Zoo for one to two months, observing and learning about medical treatment of wild animals, biology, and ecology. In December, 10 veterinary professionals from Malaysia, led by Dr. Nik Yasaimi, Dr. Zubaiduh, and Dr. Mdm Sugenah, visited the Zoo to observe our giant panda breeding management and software and hardware facilities.

Lectures and courses held by various bodies that the Zoo assisted in: Helped the Animal Technology Institute Taiwan conduct professional training in animal protection – the Advanced Professional Skills Class for Animal Control Personnel, holding two sessions of the course in November.



■ 國際合作與交流 ■

本年度國際合作與交流推展重點：持續培訓及累積本園飼養大貓熊之飼育及繁殖實務技能，投入大貓熊專業領域保育科學研究，並積極參與大貓熊相關之國際性會議及分享本園相關研究資訊；為提升丹頂鶴之展示環境與繁殖，續派員赴日本研習；持續協助中國大陸飼養繁殖臺灣長鬃山羊和梅花鹿；辦理相關專業研討會，進行國際專業交流，年內以辦理野生動物域外保育族群管理系列國際會議為

主軸，期能順利推動國內外動物園合作保育行動計畫，共同維持域外野生動物族群的存續經營。本年度外派出席國際會議及研討會計10梯次29人次；外派參與之觀摩與交流計9梯次18人次。

透過保育合作協定、合作備忘錄等之簽署，與各界建立長期研究合作關係，如：1月31日本園與日本釧路市動物園簽定友好協定。

1. 參加國際性會議

月份	會議名稱	參與人數
7	赴日本參加2012國際蜻蜓學術會議	2
8	赴英國參加國際動物園教育者協會（IZE）第21屆雙年會	2
9	赴新加坡參加「2012動物管理研習會」	6
10	赴澳洲墨爾本參加 2012「保育繁殖專家群」暨「世界動物園暨水族館協會第67屆年會（WAZA）」	2
10	赴泰國參加2012亞洲動物園及野生動物醫學會（ASZWM）與會後研習會	2
10	赴美國參加「美國動物園獸醫協會（AAZV）年會」	2
10	赴日本參加2012年丹頂鶴列名天然紀念物60周年研討會	2
11	赴馬來西亞參加2012年東南亞動物園暨水族館協會年會（SEAZA）	3
11	赴中國大陸四川成都參加2012年大貓熊研究及繁殖技術國際研討會議	2
12	赴香港海洋公園參加第40屆國際海洋動物訓練員協會年會（IMATA）	6



左圖：WAZA-墨爾本動物園慶祝150週年之滅絕作戰（本園金園長與墨爾本動物園園長）  
右圖：WAZA-Weribee華勒比野生動物園-數貓解說

■ International Cooperation and Exchanges ■

The focuses of international cooperation and exchanges for 2012 involved the following: The Taipei Zoo continued to develop and accumulate practical skills for the caring, feeding and breeding of the Giant Panda, putting efforts into scientific researches for the conservation of the Giant Panda, and actively participated in international conferences related to the Giant Panda, sharing related research data with others. In order to improve the exhibition environment for the Red-crowned Crane (*Grus japonensis*) and its breeding at the Zoo, the Zoo sent representatives to study in Japan. The Zoo also continued to assist China in rearing and breeding Formosan Serow (*Capricornis swinhoei*) and Formosan Sika (*Cervus nippon taiouanus*). Furthermore, the Zoo hosted related professional symposiums to facilitate international

professional exchanges, focusing on the ex-situ conservation and population management of wildlife as the theme of international conferences held in the year, in the hope of successfully implementing the Cooperative Conservation Action Plan Involving Foreign and Domestic Zoos to jointly sustain the survival of ex situ wildlife populations. In 2012, the Zoo sent 29 representatives to take part in 10 international conferences and symposiums and 18 representatives to participate in observational visits and exchanges.

Through the signing of cooperative conservation agreements and cooperative memorandums of understanding, the Zoo has established long-term cooperative research relationships with all sectors. For example, the Zoo signed a friendship agreement with the Kushiro Zoo on January 31.



團長赴日本參加2012年丹頂鶴列名天然紀念物60周年研討會

1. Participation in International Conferences

Month	Conference	Participants
7	Participated in the 2012 International Congress of Odonatology in Japan.	2
8	Participated in the 21 <sup>th</sup> Biennial Conference of the International Zoo Educators Association (IZE) in Britain.	2
9	Participated in the 2012 Animal Management Symposium in Singapore.	6
10	Participated in the 2012 Conservation Breeding Specialist Group (CBSG) Annual Meeting and the 67 <sup>th</sup> World Association of Zoos and Aquariums (WAZA) Annual Conference in Melbourne, Australia.	2
10	Participated in the 2012 Meeting of the Asian Society of Zoo and Wildlife Medicine and the Post-congress Symposia in Thailand	2
10	Participated in the Annual meeting of the American Association of Zoo Veterinarians (AAZV) in the United States.	2
10	Participated in the 2012 60 <sup>th</sup> Natural Monument Anniversary Symposium for the Red-crowned Crane in Japan.	2
11	Participated in the 2012 Annual Conference of the South East Asian Zoo Association (SEAZA) in Malaysia.	3
11	Participated in the 2012 International Conference on Giant Panda Research and Breeding Techniques in Chengdu, Sichuan, China.	2
12	Participated in the 40 <sup>th</sup> Annual Conference of the International Marine Animal Trainer's Association in the Ocean Park Hong Kong.	6



2. 觀摩與交流

101年度外派參與之觀摩與交流一覽表

月份	名稱	參與人數
1	赴中國大陸山東威海劉公島森林公園協助臺灣長鬃山羊待產看護事宜	1
4	赴中國大陸山東威海參加臺灣梅花鹿和臺灣長鬃山羊入住山東劉公島1周年紀念活動及進行動物健檢	3
5	赴日本北海道釧路動物園研習丹頂鶴人工孵育技術及丹頂鶴新館設計事宜	3
6	赴中國大陸山東威海市參加梅花鹿與臺灣長鬃山羊紀念館開館儀式	3
6	赴新加坡動物園進行野生動物醫療技術提升研習與國際交流	3
9	赴中國大陸山東威海劉公島森林公園進行臺灣長鬃山羊生產協助與幼獸看護	1
9	臺北市文山安全社區暨健康城市促進會赴日本東京豐島區交流	1
9	赴中國大陸江蘇、浙江省參訪動物園及水族館.	2
11	運送蒙古野馬赴韓國首爾大公園	1



教育展示與物種存續研討會

3. 辦理專業研討會

(1) 為推動國內外動物園合作保育行動計畫，共同維持域外野生動物族群的存續經營，101年度辦理野生動物域外保育族群管理系列國際會議如下：

- 6月辦理「2012教育展示與物種存續研討會」，國內、歐美與東南亞地區動物園相關組織等，共有35個單位、約150餘人與會。
- 9月辦理「馬來長吻鱷族群管理與展示工作坊」，邀請美國、西班牙、香港、新加坡共6位專家學者來臺，內容以馬來長吻鱷族群管理與展示為主軸，涵蓋圈養繁殖、血統書管理和醫療等議題。與會者來自學術單位、教育單位、民間社團等，國內外共計100餘人參與。



2. Observational Visits and Exchanges

List of investigations and exchanges in 2012

Month	Name	Participants
1	Assisted in the nursing of a Formosan Serow awaiting labor at the Liugongdao National Forest Park in Weihai City, Shandong, China.	1
4	Participated in the 1 year anniversary event celebrating the housing of Formosan Sika and Formosan Serow in the Liugongdao National Forest Park in Weihai City, Shandong, China and conducted an animal health checkup.	3
5	Studied the techniques for the artificial incubation of Red-crowned Crane and the design of the new house for Red-crowned Crane at the Kushiro Zoo in Hokkaido, Japan.	3
6	Participated in the opening ceremony for the Formosan Sika and Formosan Serow Center in Weihai City, Shandong, China.	3
6	Conducted a study and international exchange for improving wildlife medical techniques at the Singapore Zoo.	3
9	Assisted with the delivery of a pregnant Formosan Serow and the caring of the newborn animal at the Liugongdao National Forest Park in Weihai City, Shandong, China.	1
9	The Wenshan Safe Community and Healthy City Promotion Association in Taipei City sent a representative to the Toshima-ku of Tokyo, Japan.	1
9	Visited zoos and aquariums in Jiangsu Province and Zhejiang Province, China.	2
11	Delivered the Przewalski's Horse to the Seoul Grand Park, South Korea.	1

3. Hosting Professional Symposiums

(1) To promote the Cooperative Conservation Action Plan Involving Foreign and Domestic Zoos for the joint sustainment of the survival of ex situ wildlife populations, the following international conferences on wildlife ex situ conservation and population management were held in 2012:

- In June, the “2012 Education Exhibition and Species Survival Symposium” was held. About 150 participants from 35 zoo-related organizations in Taiwan, Europe, North America, and the South East Asian region took part in the event.
- In September, the “Tomistoma (*Tomistoma schlegelii*) Population Management and Exhibition Workshop” was held. Six experts and scholars from the US, Spain, Hong Kong, and Singapore were invited for the event. The event focused on the population management and exhibition of Tomistoma (*Tomistoma schlegelii*) and covered issues like captive breeding, pedigree management, and medical care. Over 100 domestic and foreign participants from academic, educational and private organizations took part in the event.



赴日本北海道釧路動物園研習丹頂鶴人工孵育技術及丹頂鶴新館設計事宜



研習人員與釧路丹頂鶴工作團隊





馬來長吻鱷族群管理與展示工作坊



● 11月辦理「2012亞洲野生動物域外保育族群管理研討會」，分為族群管理訓練工作坊、族群管理及區域性物種保育計畫研討兩階段議程，參與人員共計邀約來自9個國家，國外人員（含講師、學員）計18位，工作坊國內人員（含園內）計32位，研討會議國內人員（含園內）計84位。藉由國際自然保育聯盟（IUCN）保育繁殖專家群（CBSG）指導之族群管理訓練課程，整合亞洲地區（日本、新加坡、香港、泰國、印尼）13種受威脅性物種及臺灣本土保育類物種名單血統書評估與建置，凝聚亞洲區域性物種合作計畫共識；亞洲各重要動物園的代表也透過研討會議分享物種保育經驗及具體討論與臺灣地區目標物種的保育整合計畫。本園以前瞻性的模式，從族群管理技術基礎建立到實際整合規劃，共同為全球野生動物保育及域外族群的永續而努力。

## (2) 其他：

● 3月本園主辦與特生中心合作，假特生中心辦理「2012年東南亞動物園獸醫專業醫療訓練課程」（主題：鳥類醫療），來自美國、新加坡、

馬來西亞、香港、日本、菲律賓、泰國、柬埔寨、韓國、澳門等，國內外共有20個單位、計70餘人參與；另由本園辦理會後研習（主題：獼猴輸卵管結紮術研習工作坊）邀請來自美國、香港、馬來西亞講師各1位，為國內獸醫師學員們進行操作講授，以提升國內動物醫療技術，計30餘人參與。

● 5月辦理「2012 SEAZA東南亞動物園暨水族館蝙蝠保育教育工作坊」，邀請美國、澳洲、香港、澳門、泰國、中國及臺灣等7國23單位40人參加，研習內容有專題演講、實作課程、分組討論及戶外生態觀察等。



● In November, the “2012 Asian Wildlife Ex Situ Conservation and Population Management Symposium” was held with the agenda being divided into 2 phases – the Population Management Training Workshop and the Seminar on Population Management and Regional Species Conservation Plan. Participants from 9 countries were invited, including 18 foreign participants (lecturers and trainees included), 32 local workshop participants (Taipei Zoo personnel included), and 84 local conference participants (Taipei Zoo personnel included). Through the population management training course directed by the Conservation Breeding Specialist Group (CBSG) of the International Union for the Conservation of Nature (IUCN), the assessment and establishment of pedigrees for 13 threatened species in the Asian region (Japan, Singapore, Hong Kong, Thailand, and Indonesia) and protected native species of Taiwan were integrated to draw a consensus for the cooperation plan on Asian species. Through the seminar, representatives from major zoos in Asia also shared their respective experiences in species conservation and specifically discussed about the integrated conservation plan concerning target species in Taiwan. Adopting a forward-looking model, from the establishment of technical foundations for population management to the actual integrated planning, the Taipei Zoo strived for the conservation of wildlife in the world and the sustainability of ex situ populations.

## (2) Others:

● In collaboration with the Endemic Species Research Institute (ESRI), the Zoo hosted the



族群管理研討會-歐美非亞澳各區域代表專注提案合作情形

2012 Professional Medical Training Course for Veterinarians of Zoos in South East Asia (theme: avian medicine) at the ESRI in March. Over 70 participants from 20 organizations in Taiwan, the U.S., Singapore, Malaysia, Hong Kong, Japan, Philippines, Thailand, Cambodia, South Korea, and Macau took part in the event. Moreover, the Zoo conducted a post-conference workshop (theme: workshop on macaque tubal ligation techniques), inviting 3 lecturers from the U.S., Hong Kong, and Malaysia respectively to teach and show local veterinarians – over 30 participants in all – related techniques in order to advance animal medical techniques in Taiwan.

● In May, the Zoo held the 2012 SEAZA Education Workshop on Bat Conservation, inviting 40 people from 23 organizations in 7 countries – the U.S., Australia, Hong Kong, Macau, Thailand, China, and Taiwan – to participate. The workshop included keynote speeches, practical courses, group discussions, and outdoor ecology observations.





#### 4. 其他專業交流

- 中國大陸大貓熊專家黃炎總工程師分別與董禮、瞿春茂助理工程師來臺，指導及協助大貓熊繁殖飼育。
- 中國大陸上海動物園派15位專業人員來園進行專業參訪學習。
- 香港生態教育及資源中心Carol和Sherry來訪，了解本園教育活動辦理情形。
- 日本北海道釧路市動物園獸醫師机直美與飯間裕子來園協助檢視丹頂鶴。
- 邀請日本琉球大學副教授伊澤雅子來園演講「日本山貓的生態和現況」。

- 邀請日本專家來園演講「釧路動物園丹頂鶴保育」（講者：飯間裕子獸醫）及「釧路動物園的三隻丹頂鶴病例」（講者：机直美獸醫）。
- 邀請韓國首爾動物園Dr. Kim來園演講「首爾動物園豐富化經驗分享」。
- 邀請澳洲無尾熊管理員Haidi來園演講「無尾熊的飼養管理」。
- 邀請美國達拉斯動物園動物管理員黃詩璋來園演講「達拉斯動物園與我」。
- 邀請日本北海道圓山動物園動物管理員本田直也來園演講「箭毒蛙、特殊爬蟲類和大型猛禽繁殖」。



SEAZA工作坊-美國BCI專家演講



SEAZA工作坊-蝙蝠屋製作



SEAZA工作坊-蝙蝠超音波偵測器製作測試

SEAZA工作坊-超音波偵測器找蝙蝠



#### 4. Other Professional Exchanges

- Chinese Giant Panda experts, Chief Engineer Huang Yan, Assistant Engineer Dong Li, and Assistant Engineer Qu Chun-mao, came to Taiwan to assist in and provide guidance on the rearing and breeding of Giant Pandas.
- Fifteen professional personnel from the Shanghai Zoo in China visited the Taipei Zoo for a professional learning visit.
- Ms. Carol and Ms. Sherry of the Eco-Education and Resources Centre of Hong Kong visited the Taipei Zoo to gain an understanding of the zoo's holding of educational events.
- Veterinarians from the Kushiro Zoo in Hokkaido, Japan, Dr. Naomi Tsukue and Dr. Hiroko Iima, came to the Zoo to help examine Red-crowned Cranes.
- Associate Professor Masako Izawa of the University of the Ryukyus was invited to give a lecture on "Ecology and Current Status of the Iriomote Cat (*Prionailurus iriomotensis*)" at the Taipei Zoo.
- Japanese experts were invited to lecture on "Red-crowned Crane Conservation at the Kushiro Zoo" (lecturer: Dr. Hiroko Iima) and "Disease Cases Involving Three Red-crowned Cranes at the Kushiro Zoo" (lecturer: Dr. Naomi Tsukue)
- Dr. Kim from the Seoul Zoo in South Korea was invited to speak on "Sharing the Enrichment Experience of the Seoul Zoo".
- Australian koala keeper Haidi was invited by

the Taipei Zoo to lecture on "The Rearing and Management of Koala".

- Rita S. Huang, a zookeeper at the Dallas Zoo, was invited to speak about "The Dallas Zoo and I".
- Zookeeper Naoya Honda of the Maruyama Zoo in Hokkaido, Japan was invited by the Taipei Zoo to lecture on "The Breeding of Poison Dart Frogs, Special Reptiles, and Large Raptors".



「2012年東南亞動物園獸醫專業醫療訓練課程」會後研習工作坊