

# 3 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377種、2,483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47種、127隻動物個體，繁殖白鵝、紅領綠鸚鵡、灰頸冠鵡、藍腹鵡、折衷鸚鵡、黑天鵝、黑腳企鵝、棕欄鳳頭鸚鵡、維多利亞冠鵡、鸚鵡、大貓熊、大長臂猿、婆羅洲紅毛猩猩、白手長臂猿、白犀牛、白頸狐猴、黑猩猩、斑哥羚羊、無尾熊、長鼻浣熊、長頸鹿、阿氏夜猴、東非劍羚、環尾狐猴、穿山甲、馬來獼猴、小懶猴、弓角羚羊、蒙古野馬、臺灣山羌等珍貴動物。



■ 飼育動物數量統計表

種類 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
102年底	104	862	122	765	118	609	26	201	7	46	377	2483

## Animal Management and Administration

### 1. Animal Breeding, Exhibition and Reproduction

Animals reared and exhibited in the Zoo are primarily vertebrates – 2,483 animals representing 377 species (excluding insects, some fish, and animals under the COA's shelter program). This year, the number of animals bred under the Animals Conservation and Breeding Program reached 127 animals (47 species), including precious species such as Silver Pheasant (*Lophura nycthemera*), Rose-ringed Parakeet (*Psittacula krameri*), Grey-crowned Crane (*Balearica regulorum*), Swinhoe's Blue Pheasant (*Lophura swinhoii*), Eclectus Parrot (*Eclectus roratus*), Black Swan (*Cygnus atratus*), Jackass Penguin (*Spheniscus demersus*), Palm Cockatoo (*Probosciger aterrimus*), Victoria Crowned-Pigeon (*Goura victoria*), Emu (*Dromaius novaehollandiae*), Giant Panda (*Ailuropoda melanoleuca*), Siamang (*Symphalangus syndactylus*), Borean Orangutan (*Pongo pygmaeus*), Lar Gibbon (*Hylobates lar*), White Rhinoceros (*Ceratotherium simum*), Ruffed Lemur (*Varecia variegata*), Common Chimpanzee (*Pan troglodytes*), Bongo (*Tragelaphus eurycerus*), Koala (*Phascolarctos cinereus*), South American Coati (*Nasua nasua*), Giraffe (*Giraffa camelopardalis*), Azara's Night Monkey (*Aotus azarae*),

East African Oryx (*Oryx beisa*), Ring-tailed Lemur (*Lemur catta*), Formosan Pangolin (*Manis pentadactyla pentadactyla*), Crab-eating Macaque (*Macaca fascicularis*), Pygmy Slow Loris (*Nycticebus pygmaeus*), Addax (*Addax nasomaculatus*), Przewalski's Horse (*Equus caballus przewalskii*), and Formosan Reeves' Muntjac (*Muntiacus reevesi micrurus*).



■ Statistics of Animals

Category Time	Mammals		Birds		Reptiles		Amphibians		Fish		Total	
	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers	Species	Numbers
End of 2013	104	862	122	765	118	609	26	201	7	46	377	2483





## 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67隻；另救傷動物89隻，協助地方政府照顧收容穿山甲、臺灣長鬃山羊、山羌、棕葉貓、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。

年內購置超音波儀器組、電擊器、生理監視器、大動物麻醉機、牙科診療台及氧氣製造機等儀器設備，用於動物醫療診斷及監測、動物麻醉及急救、牙科診療及住院照護等，得以針對立即性及潛在性的醫療問題進行治療，並透過影像診斷及強化大動物氣體麻醉操作，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。本年度協助處理查緝收容種類共4種5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104種、752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4座繁殖場；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43個團體，共948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28場次；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26次。



## 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 -67 animals in total. Moreover, the Zoo rescued 89 injured animals, helped local governments taking care of animals like Formosan Pangolin (*Manis pentadactyla pentadactyla*), Formosan Serow (*Capricornis swinhoei*), Formosan Reeves' Muntjac (*Muntiacus reevesi micrurus*), Crab-eating mongoose (*Herpestes urva*), Formosan Ferret-badger (*Melogale moschata subaurantiaca*), and Formosan Masked Palm Civet (*Paguma larvata taiwana*) and assisted the Wild Bird Society of Taipei and the Taoyuan County Government on many occasions in treating injured birds and other mammals.

This year, the Zoo purchased equipment such as ultrasound, defibrillator, medical monitor, anesthesia machine for large animals, dental units and oxygen concentrator for diagnosing and monitoring the animals as well as for purposes such as anesthesia, emergency care, dental treatment and hospitalization. The equipment will allow immediate treatment and provide the ability to treat any potential medical problems. Reinforced inhalational anesthesia for large animals will improve safety during anesthesia while radiology will improve the accuracy of diagnosis for large 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 2013, the Wildlife Rescue Center assisted in the handling of 5 animals of 4 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, including bears, large felines, birds (parrots), primates, amphibians, and reptiles (752 individuals representing 104 species). We also assisted the Forestry Bureau in carrying out reproductive capability inspections on 4 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 – 43 groups and 948 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 28 sessions – and provided related units with professional consultation services on animal rearing and caring, animal welfare improvement, and wildlife conservation concepts and promotion – 26 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17種57隻、哺乳類5種18隻、爬蟲類6種18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、奧地利維也納動物園、韓國首爾動物園及日本圓山動物園、釧路市動物園、多摩動物園及澳洲庫倫賓野生動物收容中心等洽談動物交流中。重要成果如下：

- ◎善牧畜牧場交換案：換入羊駝2雌、換出查普曼斑馬1雌及雙峰駱駝1對；另換入大巨嘴鳥1雄、巴拉望孔雀雉2對，換出灰頸冠鶴1對、赤頸鶴1雄及蘇卡達象龜5隻。
- ◎南元休閒農場交換案：換入紫蕉鵒2隻、冠鳩2隻、銀雞2雌、金雞1對、翠翼鳩3隻，換出紅鵒6隻、綠鵒6隻、蘇卡達象龜2隻。
- ◎六福村野生動物園交換案：換入綠頭鴨1雄2雌。
- ◎兆豐農場交換案：換入環頸雉3對、藍腹鵒2雄，換出埃及聖鵝6隻、美洲紅鵒2對。
- ◎臺北市野鳥學會轉贈入案：五色鳥1隻、金背鳩4隻、臺灣八哥1隻、紫嘯鵒1隻、綠鳩1隻、綠鵒1隻。
- ◎民眾贈入案：紅耳龜1隻、東部菱背響尾蛇1隻。
- ◎救傷中心轉贈入：白腹刺蝟1隻、穿山甲6雄7

雌、麝香貓1雄、棕簑貓1雌。

◎野外捕獲：五色鳥2雄。

◎兆豐農場贈入案：贈入紅領綠鸚鵡10隻。

◎龍群鱷魚養殖場贈入案：馬來長吻鱷2隻。

◎動物借殖展案：白天鵝1雄送往慈湖、長頸鹿1雄送往頑皮世界、金頰長臂猿3雄送往南元農場。

◎為更新動物血緣與增加教育展示效益及鳥園重新整修規劃開放：自兆豐農場購入鳥類紫蕉鵒3隻、冠鳩6隻，自龍群鱷魚養殖場購入馬來長吻鱷3隻。



長頸鹿送往頑皮世界



#### 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, 57 birds of 17 species, 18 mammals of 5 species, and 18 reptiles of 6 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 in Austria, the Seoul Zoo in South Korea, the Maruyama Zoo, the Kushiro Zoo, the Tama Zoological Park in Japan, the Currumbin Wildlife Sanctuary in Australia, and others are in progress. Significant results are as follows:

- ◎In exchange with Shanmu Ranch, received two female Alpacas (*Vicugna pacos*) for one female Plains Zebra (*Equus quagga chapmani*), one pair of Bactrian camels (*Camelus bactrianus*); received one male Toco Toucan (*Ramphastos toco*) and two pairs of Palawan Peacock-pheasants (*Polyplectron napoleonis*) for one pair of Grey Crowned Cranes (*Balearica regulorum*), one male Sarus Crane (*Grus antigone*) and five African Spurred Tortoises (*Centrochelys sulcata*).
- ◎In exchange with Nan Yuan Garden Resort Farm, received two Violet Turacos (*Tauraco violaceus*), two Crested Pigeons (*Ocyphaps lophotes*), two female Lady Amherst's Pheasants (*Chrysolophus amherstiae*), one pair of Golden Pheasants (*Chrysolophus pictus*) and three Emerald Doves (*Chalcophaps indica*) for six Scarlet Ibises (*Eudocimus ruber*), six Striated Herons (*Butorides striatus*) and two African Spurred Tortoises (*Centrochelys sulcata*).
- ◎In exchange with Leofoo Village African Safari: Received one male and two female Mallards (*Anas platyrhynchos*)
- ◎In exchange with SKCF, received three pairs of Common Pheasants (*Phasianus colchicus*) and two male Swinhoe's Pheasants (*Lophura swinhoii*) for six Sacred Ibises (*Threskiornis aethiopicus*) and two



pairs of Scarlet Ibises (*Eudocimus ruber*).

- ◎Donation forwarded by the Wild Bird Society of Taipei: One Taiwan Barbet (*Megalaima nuchalis*), four Oriental Turtle Doves (*Streptopelia orientalis*), one Formosan Crested Myna (*Acridotheres cristatellus formosanus*), one Taiwan Whistling-Thrush (*Myiophonus insularis*), one White-bellied Green Pigeon (*Treron sieboldi*) and one Striated Heron (*Butorides striatus*).
- ◎Public donation: one Red-eared Slider (*Trachemys scripta elegans*) and one Eastern Diamondback Rattlesnake (*Crotalus adamanteus*).
- ◎Donation forwarded from the Rescue Center: one African White-bellied Hedgehog (*Atelerix albiventris*), six male and seven female Formosan Pangolins (*Manis pentadactyla pentadactyla*), one Small Indian Civet (*Viverricula indica*) and one Crab-eating Mongoose (*Herpestes urva*).
- ◎Caught in wilderness: two male Taiwan Barbets (*Megalaima nuchalis*).
- ◎Donation by SKCF: received 10 Rose-ringed Parakeets (*Psittacula krameri*).
- ◎Donation from Longchun Crocodile Farm: received two Tomistomas (*Tomistoma schlegelii*).
- ◎Animal loans for breeding and exhibition: one male Mute Swan (*Cygnus Olor*) for Cihu, one male Giraffe (*Giraffa camelopardalis*) for Wanpi World Safari Zoo and three Red-cheeked Gibbons (*Nomascus gabriellae*) for Nan Yuan Garden Resort Farm.
- ◎For purposes of renewing animal bloodlines, increasing the effectiveness of education and exhibition and the renovation, planning and reopening of Bird World: Acquired three Violet Turacos (*Tauraco violaceus*) and six Crested Pigeons (*Ocyphaps lophotes*) from SKCF, and three Tomistomas (*Tomistoma schlegelii*) from Longchun Crocodile Farm.



## 5. 推展跨區域族群管理

推動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，於去（101）年12月實質開始進行動物的跨單位調度，於本年7月完成第一階段的調度。

## 6. 推動亞洲區域族群管理計畫

延續2012年亞洲區域性物種保育計畫研討會議，針對保育繁殖專家群（CBSG）建議之亞洲地區物種合作行動方略，推動東南亞地區紅毛猩猩及馬來貘血統書合作保育計畫。此合作共識已獲得與我友好日本之橫濱動物園、多摩動物園、旭山動物園、釧路市動物園、札幌市圓山動物園、韓國首爾動物園、新加坡動物園之良好回應。另本園於2013年10月31日與札幌市圓山動物園簽署友好協議，並在10月31日至11月3日辦理「亞洲野生動物域外保育族群管理國際會議」暨「CBSG亞洲保育網」會議。本園持續扮演國際物種保育合作平臺角色，推動RSMP區域性血統書為基礎而發展共識，並規劃亞洲地區人猿配對繁殖調度，期建立亞洲區域性合作計畫框架下與世界動物園暨水族館協會（WAZA）聯繫接軌之重要保育交流機制。



## 7. 展示場館更新暨開展一生態鳥園

過去廣受遊客好評的生態鳥園係民國75年開始興建，76年即對外開放參觀。考量長年使用中因颱風豪雨、外物撕砸破裂、天敵入侵等等干擾因素，使大鳥籠龜甲網破損不堪使用，以及為強化禽流防疫措施，特於101年起開始進行網籠全面更新及新設工程。

生態鳥園更新完成後，於12月7日重新開放參觀，共計展出約32種200隻的鳥類，以樹棲性鳥類為主，地面及水面活動的鳥類為輔，營造出鳥類自然生活的氛圍。期間同時改善區內的植栽種類與整體佈置、增加鳥類食物來源、提供鳥類庇護所及築巢處，期能提升鳥類生活空間品質、展現野外的正常行為，遊客亦可近距離觀察鳥類覓食、求偶、築巢等自然行為，如同大自然的縮影。



## 5. Promotion of Cross-regional Population Management

To promote collaboration among public and private organizations that are devoted to the conservation, research and breeding of Formosan Black Bear and to develop inter situ population management for the repopulation of the Formosan Black Bear. Inter-departmental deployment of the animals began in December 2012 and the first stage was completed in July 2013.

## 6. Promoting the Regional Species Management Programme in East Asia

We continued with the 2012 conference on Asian regional species conservation and Asia Species Action Partnership strategies proposed by the Conservation and Breeding Specialist Group (CBSG) to promote cooperation for conservation of the Borean Orangutan (*Pongo pygmaeus*) and Malayan Tapir (*Tapirus indicus*) pedigrees in Southeast Asia. This collaboration has gained consensus and received a positive response from friendly organizations including the Japan's Yokohama Zoological Garden, Tama Zoological Park, Asahiyama Zoo, Kushiro Zoo, Maruyama Zoo in Sapporo as well as Seoul Zoo in South Korea and the Singapore Zoo. The Zoo signed a Memorandum for the Establishment of a Partnership with the Maruyama Zoo in Sapporo on October 31. From October 31 to November 3, the Zoo hosted the Asian Wildlife Ex Situ Conservation and Population Management Symposium and the meeting for the Asia network

of Conservation Breeding Specialist Group. Taipei Zoo continues to serve as a platform for international species conservation and cooperation and to promote regional basis based on RSMP regional pedigree. It is hoped to establish important mechanisms of exchange with the World Association of Zoos and Aquariums (WAZA) under the framework of regional cooperation in Asia.

## 7. Venue Renovation and Exhibition Opening – Bird World

Construction of Bird World, which had received positive remarks from visitors, started in 1986 and Bird World was opened to the public in 1987. However, years of wear and tear, typhoons, torrential rain, external forces and attacks from predators caused damage to the steel hex web that was beyond repair. In addition, in order to enhance protection against bird flu, the steel webs were replaced completely starting in 2012.

After the complete update, Bird World reopened on December 7, showing 200 birds of 32 different species. Most of the birds are arboreal, but are supplemented with aquatic birds and birds that live on the ground to create the feeling of their natural habitat. The vegetation and overall arrangement of Bird World were also improved to provide more food sources, shelters and nesting areas. A better environment will hopefully encourage normal behavior of wild birds. Visitors may also observe the birds closely as they forage, mate and build nests, providing a snap shot of Mother Nature.







## 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，以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。年內多位學者專家來園指導，臺灣大學獸醫學院林中天教授指導小貓熊眼科診療、臺灣大學附設動物醫院貓專科門診謝富閔醫師專題演講、臺灣大學附設動物醫院姜鴻吉醫師進行動物臨床檢驗技術講座及實作研討、中興大學林以樂老師演講馬科鼻竇及齒科疾病並討論臨床病例、臺灣大學洪致遠老師指導無尾熊牙科問題等。另因應國內爆發狂犬病疫情，邀請臺灣大學附設動物醫院劉振軒院長來園主講「狂犬病防治」，亦派員參加狂犬病預防及控制國際研討會等。除與獸醫界的合作外，亦透過與人醫的交流與合作，如在大貓熊的繁育技術合作，加速提升野生動物的診療技術。

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月份澳洲墨爾本大學學生1名；臺灣大學學生2名；3月份澳洲雪梨大學學生1名；8月馬來西亞UPM大學學生1名；9-12月屏東科技大學學生3名。提供國內各大學獸醫學、生物相關、觀光遊憩管理等科系學生，進行為期1-2個月的暑期實習，6月份紐約州立大學學生1名、上海浦東德國學校學生1名、7-8月實習生及候鳥計畫實習學生計65人，提供學生野生動物醫療、生物學、生態學等觀摩學習。

協助各單位辦理之演講及課程有：5月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；10月協助金門國家公園辦理「金門國家公園水獺救傷研習活動」，由金園長、陳亭余獸醫及吳松霖研究助理前往擔任講師。



## 8. Cooperation with 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 pathology internships at the zoo for NTU students. Many scholars and experts paid visits to the Taipei Zoo in 2013. Professor Lin Chung-Tien from the School of Veterinary Medicine, National Taiwan University advised on eye treatment for the Giant Panda cub. Dr. Hsieh Fu-Ming from the cat clinic of National Taiwan University Veterinary Hospital gave a keynote speech. Dr. Chiang Hung-Chi from National Taiwan University Veterinary Hospital led a forum on clinical examination techniques and practices for animals. Professor Lin Yi-Lo from National Chung Hsin University gave a speech on sinus and dental diseases for horses and discussed clinical cases. Professor Hung Chin-Yuan from National Taiwan University gave instruction on dental problems among Koalas. In addition, as a response to the outbreak of rabies, the Zoo invited Liu Chen-Hsuan, Dean of National Taiwan University Veterinary Hospital to speak on Rabies Prevention and send representatives to attend international seminars on rabies prevention and control. With collaboration between the veterinary and human medical fields, and collaboration in areas such

as breeding of Giant Pandas, the Zoo will speed up the improvement in techniques for treating wild animals.

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, including one student from the University of Melbourne, Australia and two students from NTU in January; one student from University of Sydney, Australia in March; one student from UPM, Malaysia in August; three students from National Pingtung University of Science and Technology between September and December. A summer internship that lasts for one to two months is offered to college students in Taiwan majoring in subjects related to veterinary medicine and biology as well as tourism and recreational management. In June, one student from State University of New York received the internship opportunity together with one student from German School and Kindergarten Shanghai, and 65 students took part in the internship and Migratory Bird Project. Students took advantage of learning and observation opportunities in wildlife medicine, biology and ecology.

Lectures and courses held by various bodies that the Zoo helped with: In May, A.T.R.I. – Animal Technology Laboratory conducted two sessions of professional training for animal conservation – Advanced Courses for Animal Keepers. In October, the Zoo assisted Kinmen National Park with Kinmen National Park Otter Rescue Study Program. Director Chin, veterinarian, Dr. Chen Ting-Yu and research assistant, Wu Sung-Ling were speakers.



## 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；為提升丹頂鶴之照養，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，延續去年辦理國際會議之重點主軸，續以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9梯次26人次；外派參與之觀摩與交流計6梯次8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：10月31日本園與日本圓山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
5	赴斯里蘭卡尼甘布參加第22屆IUCN鱷魚專家群工作會議	2
6	赴新加坡參加穿山甲專家群保育研討會及動物照養實習	3
9	赴英國參加2013年歐洲動物園暨水族館協會年會	2
9	赴香港參加第2屆「兩岸四地大貓熊保育教育學術研討會」	4
9	赴美國參加2013年美國動物園獸醫協會（AAZV）年會	2
10	赴美國參加2013年保育繁殖專家群年會（CBSG）、世界動物園暨水族館協會年會（WAZA）	4
10	赴新加坡參加第6屆「亞洲野生動物及動物醫學研討會（ASZWM）」	3
11	赴越南參加2013年東南亞動物園暨水族館協會年會（SEAZA）	4
12	赴日本參加2013年亞洲動物園教育者研討會（AZEC）	2



2013雉類族群管理與教育展示研討會



## International Cooperation and Exchanges

During 2013 the Zoo implemented the following international cooperation and exchanges: The Taipei Zoo continued to develop and accumulate practical skills for the care, feeding and breeding of the Giant Panda, putting efforts into scientific research 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 preservation of 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 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 2013, the Zoo sent 26 representatives to take part in nine international conferences and symposia and eight representatives to participate in six 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 Maruyama Zoo on October 31.



### 1. Participation in International Conferences

Month	Conference	Participants
5	Representatives attended the 22 <sup>nd</sup> Working Meeting of the IUCN-SSC Crocodile Specialist Group in Negombo, Sri Lanka.	2
6	Representatives attended IUCN-SSC Pangolin SG (Species Survival Commission Pangolin Specialist Group) and animal keepers internship.	3
9	Representatives attended the 2013 World Association of Zoos and Aquariums (WAZA) Annual Conference in U.K.	2
9	Representatives went to Hong Kong to attend the 3 <sup>rd</sup> Annual Giant Panda Conservation Education Seminar for China, Taiwan, Hong Kong and Macau.	4
9	Representatives attended the 2013 American Association of Zoo Veterinarians (AAZV) Annual Conference in the U.S.	2
10	Representatives attended the 2013 Conservation Breeding Specialist Group Annual Meeting and WAZA Annual Meeting in the U.S.	4
10	Representatives attended the 6 <sup>th</sup> Asian Society of Zoo and Wildlife Medicine (ASZWM) in Singapore.	3
11	Representatives attended the 2013 Southeast Asian Zoo Association (SEAZA) in Vietnam.	4
12	Representatives attended the 2013 Asian Zoo Educators' Conference (AZEC) in Japan.	2



## 2. 觀摩與交流

### ■ 102年度外派參與之觀摩與交流一覽表

月份	名稱	參與人數
7	赴山東威海市劉公島國家森林公園指導擴增圈養場地規劃	1
8	赴日本上野動物園邀請演講--臺北大貓熊的引進與教育活動暨東京動物園協會成員交流	1
9	赴大陸四川成都大熊貓研究中心雅安基地現場引導及說明（配合臺北市議會教育委員會考察）	2
11	赴日本參加安全社區認證典禮並與大阪府松原市簽署友好協定，締結姊妹社區	1
11	赴大陸山東威海劉公島國家森林公園協助臺灣長鬃山羊醫療	1
12	赴日本釧路學習丹頂鶴義肢製作	2

## 3. 辦理專業研討會

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永續經營，102年度續辦理野生動物域外保育族群管理系列國際會議如下：

- ◎5月辦理「2013雉類族群管理與教育展示研討會」，以族群管理為研討會主軸，涵蓋動物飼養繁殖、人工孵化與教育展示等之案例與成果，分享結合動物展示與域內保育方面的專業與經驗

等。有來自美、日、韓、新加坡等國外專家及國內公民營相關機構人員參與，共計有121人。

- ◎7月於臺北主辦「2013瀕危龜類保育行動研討會」，邀請國際保育聯盟（IUCN）淡水龜與陸龜專家群主席、香港嘉道理農場暨植物園保育主任和國內外專家學者，以及國內公民營相關機構人員和大專院校學生等共100人前來與會，共同討論未來推動國際保育合作等相關議題及業務。



2013瀕危龜類保育行動研討會

## 2. Observational Visits and Exchanges

### ■ List of investigations and exchanges in 2013

Month	Name	Participants
7	Representatives visited Liugong Island National Forestry Park in Weihai, Shandong Province to guide the captivity expansion.	1
8	Representatives visited Ueno Zoological Gardens in Japan and gave the speech – The Introduction of Giant Panda and Education Programs in Taipei, and had exchanges with members of Tokyo Zoological Park Society.	1
9	Representatives visited the Ya'an Bifeng Gorge Base of China Conservation and Research Centre for the Giant Panda in Chengdu, Sichuan Province, China for guidance and instructions (in conjunction with the observational trip of Education Committee Members from Taipei City Council).	2
11	Representatives attended the safe community certification ceremony in Japan and signed a Memorandum for the Establishment of a Partnership with the City of Matsubara in Osaka Prefecture as sister communities.	1
11	Representatives visited Liugong Island National Forestry Park in Weihai, Shandong Province to assist with the treatment of Formosan Serow.	1
12	Representatives visited Kushiro, Japan to learn prosthetic production for Red-crowned Crane.	2

## 3. Hosting Professional Symposiums

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 2013:

- ◎The Zoo hosted the 2013 Pheasant Population Management and Exhibit Conference in May with group management as the focus of the conference. The conference covered cases and outcomes in animal feeding and reproduction, artificial incubation and educational exhibits to share expertise and experiences in animal exhibits and *in-situ*

conservation. International experts from the U.S., Japan, Korea and Singapore and representatives from related public and private organizations attended. There were a total of 121 participants.

- ◎The Zoo held the 2013 "Turtle Conservation in Action" Conference in Taipei and invited the Chair of IUCN/SSC Tortoise and Freshwater Turtle Specialist Group, Director of Conservation from Kadoorie Farm and Botanic Garden, experts and scholars from Taiwan and around the world, representatives from related public and private organizations and college students. One hundred people were in attendance to discuss related issues and tasks for promoting international collaboration on conservation in the future.



與日本圓山動物園簽署合作協定





2013亞洲野生動物域外保育族群管理國際會議暨CBSG亞洲保育網會議

◎10月31日~11月4日於臺北辦理「2013亞洲野生動物域外保育族群管理國際會議暨CBSG亞洲保育網會議」，本會議分為靈長類人工繁殖技術工作坊、亞洲野生動物域外保育族群管理國際會議、CBSG亞洲保育網會議等三階段議程。共計有10個國家（含地區）人員參與，國外與會貴客人數共25位；工作坊人數（含園內）共86位；研討會議人數（含園內）共96位。

此次會議考量本園重點發展物種及延續去（101）年會議「亞洲地區物種合作行動方略」內容，設定會議主軸為靈長類動物，並選擇紅毛猩猩為亞洲地區族群管理合作之標的物種；建立國際物種保育合作平臺、提供巨猿類國際保育計畫交流契機。會議中強化亞洲各國以血統書為基礎的族群管理共識，推動以紅毛猩猩為亞洲地區進行合作管理的示範物種，並建立亞洲區域性合作計畫與世界動物園暨水族館協會重點計畫接軌之交流可能性。本次會議實質提升本園於亞洲各國域外族群保育之領導地位，除讓與會各國專家留下深刻印象與肯定外，更能促成未來重要保育物種（如金剛猩猩）的交流及引進。

#### 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魏明副部長、董禮助理工程師來臺，指導、協助大貓熊繁殖，以及大貓熊幼仔「圓仔」之撫育、飼管與醫療。
- ◎普渡大學影像醫學教授Dr. Heng 來園演講「野生動物X光判讀技巧」。
- ◎德國萊比錫動物園獸醫來園進行穿山甲超音波影像學研究。在園期間並專題演講「穿山甲圈養概況及穿山甲檢驗與超音波影像研究」。
- ◎澳洲庫倫賓動物園無尾熊管理員Heidi Patrick來園瞭解無尾熊近況，及協助勘查找尋新場地。
- ◎香港海洋公園獸醫來園訪問。
- ◎澳洲庫倫賓動物園獸醫Michael Pyne來園演講「無尾熊醫療」，以及協助進行無尾熊Q-比的麻醉健檢。
- ◎美國LSU獸醫教授Dr. Tully來園訪問。
- ◎上野動物園飼育員佐藤小姐等2人來園參訪及進行飼養管理交流。

◎The Zoo hosted the Regional Species Management Programs of Primates Conference 2013 from October 31 to November 4 in Taipei. The agenda had three parts, a workshop on artificial reproduction techniques for primates, the Asian Wildlife Ex Situ Conservation and Population Management Symposium and the Conservation Breeding Specialist Group Asia network conference. 25 foreign guests from 10 countries attended the conference. 86 from Taiwan and abroad attended the workshop and 96 attended the conference.

This conference took the priority species at the Zoo into consideration and extended the Asia Species Action Partnership from the 2012 conference. The focus of this conference was primates, and the Orangutan was chosen as the species for regional collaboration on population management in Asia. The conference served as a collaboration platform for the conservation of international species and provided opportunities for international exchanges on conservation programs for giant apes. The conference strengthened the consensus of population management through pedigrees in Asia to promote collaborative management with the Bornean Orangutan as the demonstration species. It also created the possibility for the Asian regional cooperation plan to connect with the priority plans of the World Association of Zoos and Aquariums (WAZA). Taipei Zoo's leading role in *ex-situ* conservation among Asian countries has been substantiated through this conference. The Zoo has gained recognition from international experts and made a great impression on them. In addition, the conference has promoted future exchanges on protected species such as Western Gorilla (*Gorilla gorilla*) and the opportunity to bring them into Taiwan.

#### 4. Other Professional Exchanges

- ◎Engineer Huang Yan, Chinese experts on Giant Pandas visited Taiwan with deputy Director, Wei Ming and assistant engineer, Dong Li to guide and assist with the breeding of Giant Pandas as well as nursing, feeding and medical treatment for the cub, Yuan Zai.



- ◎Dr. Heng, Associate Professor of Diagnostic Imaging from Purdue University gave a speech on Radiograph Reading on Wildlife Animals at Taipei Zoo.
- ◎Veterinarian from Leipzig Zoological Garden, Germany visited Taipei Zoo to conduct research on ultrasonography for the Formosan Pangolin and gave a speech on Formosan Pangolin Captivity, Formosan Pangolin Examination and Ultrasound Imaging Studies.
- ◎Heidi Patrick, Koala keeper from Currumbin Wildlife Sanctuary, Australia visited Taipei Zoo to check on the conditions of the Koalas and help search for and inspect new sites.
- ◎Veterinarian from Ocean Park Hong Kong visited Taipei Zoo.
- ◎Michael Pyne, veterinarian from Currumbin Wildlife Sanctuary, Australia gave a speech on Treatments for Koalas at Taipei Zoo and assisted with the anesthetized check up for the koala, Q-Bi.
- ◎Dr. Tully, professor of Veterinary Clinical Sciences from LSU, U.S.A visited Taipei Zoo.
- ◎Ms. Sato, keeper from Ueno Zoological Gardens visited Taipei Zoo and participated in exchanges on feeding management.