



# 抱動物園報



## Taken From Taipei Zoo Quarterly Vol.124

### Bat Special Collection

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 1999 Citizen Hotline  
 ( For callers outside of Taipei City please dial (02) 2720-8889 )  
 ( Toll-free, 1999 provides 24-hour operator service. )  
 Published in 2011  
 http : //www.zoo.gov.tw  
 E-mai : zoo@zoo.gov.tw  
 Printed : Tiger Advertising Design 886-2-23211894  
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Read more about "Bat Special Collection" special coverage in the No.124 issue of the Taipei Zoo Magazine !

# TAIPEI ZOO PAPER



■ Chen Xiangfan

## Captive Breeding of Flying Fox in Zoos

Taipei Zoo has been breeding flying fox since the Yuanshan era, the last one individual, in captivity for 24 years, died because of old age last year. It is the longest record of Formosan flying fox in captivity so far. In order to take good care of these precious wild animals, zoo carefully planned environment of flying foxes in captivity and daily management, and the working process also reached the international breeding standards laid down for flying fox.

### Providing various food for flying fox

Feeding food is diced, mixed evenly, and then dispersed in various food bowls, food pieces about the size of the thumb to facilitate flying foxes' taking by claws. Sometimes administrators make food strings by cotton cord, cutting food into pieces or flakes, drilling a hole in the middle, getting cord through food, and then knotting cord at the bottom to prevent food from falling.



### The learning from others may benefit by other's strong points

Many zoos and conservation center abroad raise flying foxes. If for the purpose of displaying, normally, cage is quite high, so that flying foxes have sufficient activity space, and some even allow visitors to enter into the cage; some zoos raise flying foxes with other animals, arranged ecosystem exhibition, during the visit, inadvertently, flying fox may glide by, and visitors are surprised pleasantly.



## Pursuit of Formosan Flying Fox in Green Island

■ Chen Xiangfan · Wu Huiwen

Formosan flying fox is one of the five subspecies of Ryukyu flying fox, whose habitat was stable in Green Island early, due to over-hunting, the population is drop sharply. Most literatures of Formosan flying fox were recorded before Japanese colonization, such as measurement, food habits, special characters and appearing locations etc. sporadic individual observation records; after Taiwan retrocession, the investigations and records of Formosan flying fox were much less, coupled with population decline, it is difficult to make a complete ecological research. Through interviews with island residents, record their memories of Formosan flying fox becomes an important way of learning about the behavioral ecology and community characteristics of Formosan flying fox in the past in Green Island.

As far as eastern Taiwan's outlying islands are known, including Green Island and Turtle Mountain Island, there are habitats of a small amount of flying fox populations, we are very fortunate to observe its breeding and nursery behaviors. Although the fatal factor, over-hunting flying fox in the past does no longer exist, however, in order to ensure the continuous survival of the only individuals, the maintenance of its habitat has become the most important environmental issue.





In response to the Year of the Bat 2011-2012 of United Nations Environment Programme, the Taipei Zoo and Bat Conservation Society of Taipei organized the "Forest Elf", "Interview Black Forest" and "Stay Overnight at Zoo" three activities to promote bat conservation education.

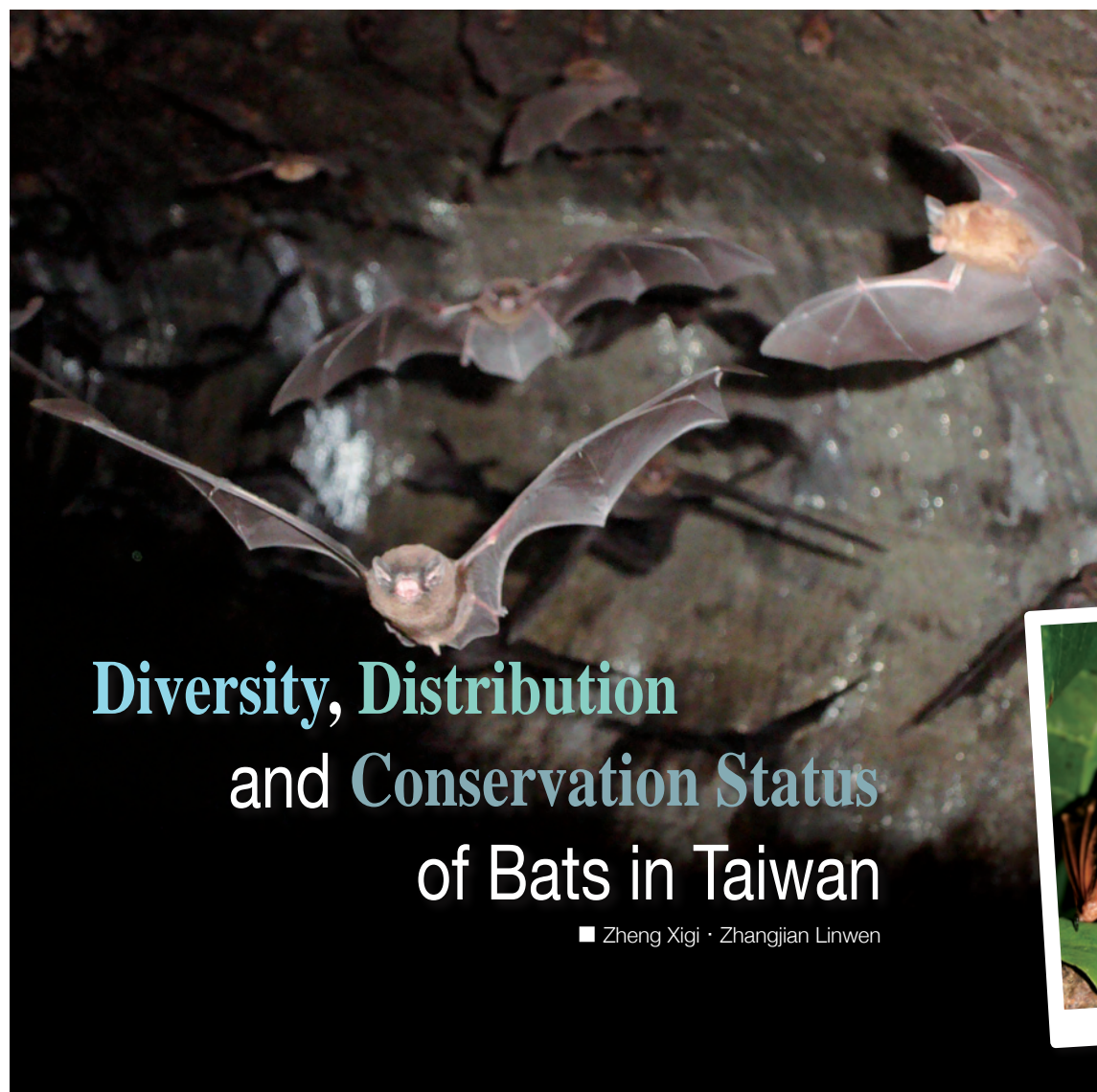
Through these promotion activities, we expect everyone who attend the camp could learn more about bats, not to hurt our friends by rumors or unreal legends any more. Are you willing to learn more about bats? Let's work together to understand bats and to protect our precious natural assets!



This year is the year of the bat; the Foundation will mention more topics related to bats of every variety for granted. The so-called "more" is a comparison since the Foundation usually mentions bats most often from May to July every year (most likely pick up a baby bat) and the eve of Halloween.

Halloween Bats and the nocturnal animal conservation educational activities are considerably important parts on the foundation's conservation calendar. In order to implement the local conservation, the Foundation combines creatures with Eastern and Western festivals, organizes entertaining activities, and hopes that one day, people would think of a specific creature on a specific day, just like Zongzi (pyramid styled Chinese dumpling) in Dragon Boat Festival and moon cake in Moon Festival! The point is learning through entertaining, so that people will come again next year, rather than spoon-feeding education. As long as people think of bats in October each year, then intend to ask where the venue of Halloween activities is, and then that has met the expectations of the Foundation!

This year is the year of the Bat. Halloween, of course, will continue to hold the same bat education activities. My dear friends please remember to join us!!!



Taiwan has more than 80 kinds of terrestrial wild mammals, and bats are a category with the largest species. However, they are the most often ignored even misunderstood by us human.

More and more people pay attention to the biodiversity, because we know that every creature must co-exist with others. However, nearly 50 years, Taiwan's rapid economic growth and people's expend their livelihood lead to the gradual disappearance of the natural habitat, not only affects human lives but causes survival crisis of many species.

This year is the International Year of Bat; a large number of bats are a part of the Taiwan ecosystem which plays a very important and key role. While bats are making many

ecosystem services quietly for human, we should think what can be made for this group of night elves!?







■ Zheng Xigi · Zhou Zhenghan

## *Miraculous Survival Skills of Bat*

Bats play an important roll in various ecosystems, fruit-eating species have the ability of flower pollination and seed spreading, insect-eating species are with function of insects inhibition, even if vampire bats that distribute in Central and South America only, their

anticoagulant saliva components also help surgical treatments, advantages also outweigh disadvantages for humans. Bat has a sophisticated ultrasonic echolocation system, smart flying ability, special morphological structure, procreation delay and

dormant physiological adaptations, and specific upside down behavior, to show us over and over again that they are a group of night elves with amazing survival skills.



■ Wu Zhongxin

## *2011-2012 Year of the Bat and Bat Association of Taiwan*

Taiwan has been lack of local bat ecology information, combined with human disturbance and the growing problems of environmental damage and environmental warming, resulting in many Taiwan rare and precious bat species face a crisis of survival. To this end, by the efforts of domestic exports and scholars who study in bats as well as volunteers of bat conservation, the Bat Association of Taiwan was registered in Ministry of

the Interior and established on March 6, 2004

In order to bring justice for long-term stigmatized bats and highlight bat's great contribution to the global environment, United Nations Environment Programme announced particularly that 2011-2012 are the Year of the Bat! Hope this will awaken the attention to bat's contribution to the ecological environment and the importance of bat conservation.







# Kenya

## Wild Animal Paradise—Kenya (part II)

■ Hung Li-wen and Wu Mei-hui


The “8-day-trip of Kenya Animal Migration” really broadened my outlook, touched me deeply, and cannot help but praise the magical nature and the profound wild animals. However, follow long expedition of wild animals in prairie that requires in a very good health condition and well endurance! Otherwise, people who are not suitable for a long journey can visit the Africa Animal Area of Taipei Zoo, the “Big Five of Taipei Zoo” elephant, hippopotamus, giraffe, rhino, orangutan and Gorilla all are here, waiting to say Hello to you!



## Q&A Secret File of Bat

■ Zheng Xigi · Fang Yiping

In Eastern cultural, bats represent luck and fortune, folks often construct “five blessings” totem with five bats. However, Western world considers bat as the embodiment of a vampire generally; although there are films such as the justice messenger Batman and the attractive men and women appearance Twilight in recent years in the United States, its not lovable weird appearance and reversal of nocturnal habits which has always been considered as terror, ominous signs; people kept away from it, and therefore produced a number of mysterious and strange legends. This is because people do not understand these mysterious night elves. Let us through the Q&A to understand the secrets of bats.



■ Yu Zhenfang

## Bats and Infectious Diseases



Due to human misunderstanding, bat is often mistaken for harm to human and given for killing. In fact, bat plays an important role in capturing pests, pest control, plant pollination and seed spreading. In addition, scientists developed sonar echo systems and other technology through the study of bats, and applied the preventing coagulation substance in saliva of vampire bats to study medicine. Bat has done a lot of contributions!

In terms of the spread of infectious diseases, bat is really playing some role; according to current knowledge, bat is a vector for infection diseases Rabies, Severe Acute Respiratory Syndrome, Ebola Hemorrhagic Fever, Histoplasmosis, Hendra virus and Nipah virus infections. This article will introduce the more serious bat-related infectious diseases.

