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# Rehabilitating Rescued Chinese Farm Bears (*Ursus thibetanus*): Results, Limitations, and Implications

by Peter J. Li

## Introduction

Every year, thousands of wild animals are rescued throughout the world. Most of them are victims of a sudden catastrophic event caused by nature or human acts. In China, Asiatic black bears (*Ursus thibetanus*) are being rescued from bear farms in the province of Sichuan by the Hong Kong-based Animals Asia Foundation (AAF). The rescue efforts—the China Bear Rescue Campaign—are sanctioned by the Chinese government in response to mounting international pressures calling for the end of China's bear farming, a business operation for extracting bile from an open wound cut in the abdomen of captive bears. Unlike other rescued animals that are victims of a sudden disastrous event, Chinese farm bears are tortured daily for up to 22 years in the name of developing China's traditional medicine. Farm bear sufferings are, however, worse than what the nature could have done to them. To rehabilitate and accommodate the rescued farm bears, Animals Asia Foundation built Chengdu Asiatic Black Bear Rescue Center.

One objective of wildlife rehabilitation is the restoration of the physical and mental capacity of the rescued animals for their release to their natural habitats. Rehabilitation studies have shown mixed results based on the survival rates of animals released to the wild (Merav et al. 2002, Lander et al. 2002). Likewise, rehabilitated bears released to the wild also have different survival results (Galina 2002, McRary 2003). Rehabilitating rescued wild bears takes different forms. In one case, intimate human contact does not seem to be a problem in getting the bear cubs to exhibit ursine behaviors and to successfully adapt to a life by themselves after release (Galina 2002). Others allow little human contact to minimize imprinting, or being too dependent on humans (Gilbert et al. 1998, appbears.org 2004). The mixed results of rehabilitation underlie concerns about the efficacy and necessity of rehabilitating traumatized creatures that are not rehabilitable. Costly and less-than-effective rehabilitation of individual animals that are not in danger of extinction often invites criticism from opponents of rehabilitation (Estes 1998).

The Chengdu Rescue Center is different from most other rescue operations around the world. The rescued farm bears have problems that other rescued wildlife animals do not have. Importantly, Asiatic black bears that are farmed for their bile are listed as endangered species in Category II in the Wildlife Protection Law of China.

This article begins with an introduction to the unique conditions of the Chinese farm bears to highlight the challenges that confront the Chengdu Rescue Center. Next, the center's postrescue care program, including its components and results, is described, and the irreversible traumas the rescued bears sustain during their years of abuse on the farms are made apparent. Finally, the relevance of the experiences of the Chengdu Rescue Center to China's captive animal management, wildlife conservation, and anticruelty legislation is discussed.

## Methods

Three methods were used to collect the descriptive data in this study. First, a field study was conducted at the Chengdu Bear Rescue Center in January 2004, when the center's veterinary team was performing corrective surgeries on the recently rescued farm bears. The timing was good for observing the complex surgical procedures implemented at the center and for recording on-site the medical problems common among the farm bears. In addition, the field trip allowed me to study the center facilities, and to observe bear behaviors during and after rehabilitation. In five afternoons, I spent one hour each at the center's Rehab Zone and the permanent living quarters,

**ABSTRACT:** The objects of daily physical abuse and appalling deprivation for up to 22 years, rescued Chinese farm bears (*Ursus thibetanus*) pose a comprehensive challenge to the Chengdu Asiatic Black Bear Rescue Center, created and managed by the Animals Asia Foundation. This study looks at the unique conditions of the rescued bears, examines the center's rehabilitation program, and identifies the program's limitations. Despite the world-class care provided by the center and the qualitative improvement in their health, the bears have irreparable physical and mental incapacitation that undercuts their chances to survive in the wild. This situation questions the moral ground of China's bear farming and challenges its prevailing practices in captive-animal management and wildlife conservation. Importantly, the study highlights the need to accelerate anticruelty legislation on the Chinese mainland.

**KEY WORDS:** Asiatic black bear, *Ursus thibetanus*, bear farming, farm bears, bear rescue and rehabilitation, post-rescue care, Chengdu Asiatic Black Bear Rescue Center

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**Left: On the more than 240 Chinese bear farms, many Asiatic black bears are kept captive in tiny metal cages, too small to allow the bears to turn around in. Some of the bears have lived up to 22 years in these brutal conditions.**

**Above: A newly rescued bear arrives at the Chengdu Asiatic Black Bear Rescue Center**



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Finally, the study involves a large number of face-to-face, telephone, and electronic interviews with the center's management and veterinary teams, former owners of a closed bear farm, nongovernmental organization (NGO) activists who investigated China's zoo conditions, Chinese activists who have worked on matters related to bear farming, and Chinese officials in charge of wildlife conservation. These interviews resulted in information that supplemented the data obtained from the field study.

#### **Conditions of Rescued Farm Bears**

China's farm bear suffering is being recognized by more and more people throughout the world. Veterinary studies and academic discussions have detailed the extent of the physical and mental traumas of the more than 7000 bears on the farms (Robinson and Cochrane 2002; Li, P. 2004). The following brief description of the rescued bears' conditions highlights the challenges faced by the Chengdu Rescue Center.

#### **Physical Conditions**

Generally, farm bears in China suffer from two acts of cruelty: deprivation and infliction. Deprivation, according to Tom Regan, author of *The Case for Animal Rights*, is defined as a harm to the animals by denying them opportunities for doing what would bring them satisfaction, whereas inflictions are harms to the animals by diminishing the quality of their life and by "detract[ing] indirectly from the individuals' overall welfare" (Regan 2003). Specific to China's farm bears, acts of deprivation include denial of proper and adequate foods, denial of free access to water, severe limitation of space, and a total denial of an enriched environment. Infliction of harm to the bears is directly associated with the techniques of bile extraction and farmers' profit-making drives. All bears undergo a crude surgical procedure, often done by untrained personnel,

observing bears in the enclosures. Because of my short duration at the center, and because bear behaviors during the winter can be different from those exhibited during the spring and summer, my observations were cross-verified with observations made by Claire Smith and Tim Roberts, the veterinary nurse and bear manager, who had been at the center for more than nine months.

Second, a literature review was conducted to gather information on the latest recommendations on captive-animal care. Special attention was paid to works on the physical and mental conditions of captive animals and the recommended welfare remedies for these animals. The questions I had in the course of the literature review is: How much does the Chengdu Rescue Center's postrescue care program conform to the latest recommendations of captive animal care? What are the limitations of the program, considering the level of suffering the former farm bears went through?



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**Above top: Dr. Gail M. Cochrane and her staff perform corrective surgery designed to undo the physical damage done to the bears on the bile-extraction farms.**

**Above bottom: A bear is prepared for surgery as the author (far left) looks on.**

**Right top: A damaged gallbladder with huge gallstones, removed from a former Chinese farm bear.**

**Right bottom: Catheters removed from former farm bears.**

to insert a catheter or create an artificial fistula in the abdomen (Robinson and Cochrane 2002). The catheter or fistula is required to extract bear bile, an alleged cure-all ingredient in Chinese traditional medicine. Postsurgery infections and complications cause bears prolonged suffering and often agonizing death. Additionally, the bears suffer from farm owner-inflicted harms. For example, to make the bears easier to milk and to take away their defenses, farm owners resort to cruel practices such as chopping off the top portion of the bears' front paw fingers or sawing down to the gum level of the bears' front canine (Robinson and Cochrane 2002). Farm bears endure painful bile extraction from the open wound up to six times a day (Interview with former farm owners 2004).

The rescued farm bears have a wide range of physical problems. These include permanent incapacitation (27 of the 139 rescued bears at the center are missing limbs), damaged gallbladder, problem abscesses, peritonitis, septicemia, abdominal hernia (among 30% of rescued bears), gallstones, and gallbladder polyp formation. Foreign objects are implanted or inadvertently left behind in the abdomens of almost all the bears. Three of the center's recently rescued bears have been diagnosed with cataracts; one bear is completely blind due to years of neglect on the farm (Electronic interview with Claire Smith 2004). According to Jill Robinson, CEO and founder of the Animals Asia Foundation, and Dr. Gail M. Cochrane, AAF's veterinarian director, these problems must be addressed immediately before the bears can start the rehabilitation process.

#### **Mental Conditions**

More than half a century ago, environmental and behavioral deficits were identified as the root cause of serious mental problems among captive animals (Hediger 1950). Chinese farm bears exhibit discernible mental disorders of different degrees due to years of confinement in individual, totally barren iron cages. "Stereotyped movements were significant but limited to what could be achieved in their inadequate environment: weaving, bobbing, bouncing, rocking, and licking of the forearms" (Robinson and Cochrane 2002).

The majority of rescued farm bears, 90–95%, display significant context-free acts. Between 5–10% of the bears appear to be severely mentally disturbed. Signs of their mental disorders include psychotic self-destruction such as eating their own legs, rubbing their nose against iron bars, scraping their feet on the

floor until bleeding, and sudden, unprovoked running across the den area. Such “out-of-mind” former farm bears were also spotted as exhibits in a private zoo near Chengdu (Wedderburn 2001).

### **Postrescue Care Programs**

The Chengdu Rescue Center is built on 19 hectares of leased land in the suburb of Chengdu, the capital of Sichuan Province. The center was designed and is operated in such a way that the welfare needs of the bears are given full consideration. Although China is not a member of the Southeast Asian Zoological Association, the Chengdu Rescue Center is perhaps the only captive-animal institution on the Chinese mainland that meets and exceeds the minimum welfare requirements suggested by the association (SEAZA 2002). The center is divided into three zones: quarantine, rehabilitation (Rehab Zone), and permanent living quarters (the Bamboo Forest). The postrescue care program implemented at the center is composed of veterinary care and an enrichment routine.

### **Veterinary Care**

Veterinary care at the Chengdu Rescue Center has two components: corrective operation and routine veterinary service. The corrective operation is performed on all newly rescued bears that have undergone bile extraction on the farms. The routine veterinary service includes daily visual examination of bear conditions, daily monitoring of conditions of bears under medication, special care provided to mentally disturbed bears, and emergency veterinary care of sick bears. The center’s veterinary team comprises a senior veterinarian and two resident veterinary nurses. The center’s hospital resides in a two-storey building. It has three wards with full capacity for 12 bears. The operation room is equipped with state-of-the-art tools imported from the West. Importantly, it is maintained in strict sterile conditions, and operations are performed in compliance with the standard procedures practiced in the West.

### **Corrective surgery**

Corrective surgery is aimed at restoring the physical health of the bears so that they are ready for physical therapy to strengthen their physique, which has been weakened by years of close confinement. Other more direct objectives include removing the damaged gallbladder and foreign objects such as catheters, metals, plastics, and sutures, and treating problem abscesses. The surgery is also used to fix the abdominal hernia problems seen among some 30% of the rescued bears. In the course of the operation, the veterinary nurses scale and polish the teeth and examine the bears’ eyes. Importantly, the veterinarian uses the opportunity to check the bear’s internal organs to ensure that no obvious tumor is present that was not detected by other means (such as the portable ultrasound). In two of the corrective surgeries performed in December 2003, a 5-kg liver tumor and an unusually over-sized kidney were found in two separate bears. Both bears were euthanized.

Prior to surgery, the bear is anesthetized (at about 9 a.m.), and weight and body measurements are taken. In the operating room, the bear is put on a gas anesthetics machine, which keeps the bear anesthetized and allows the operation to continue for a number of hours. A pain-killer, Torbagesic, is injected every 90 minutes. During the surgery, the heart rate, respiratory rate

and blood oxygen concentrations, core body temperature, and blood pressure are measured with monitoring equipment. Manual check of heart and respiration rates is conducted every 10 minutes to guard against machine errors. Additionally, three different fluids are used through intravenous drip in the course of the operation. All surgery tools and utilities are maintained in strict sterile conditions. Before incision, the veterinarian uses the portable ultrasound to ascertain the location of the gallbladder and any abnormal growths on the liver. On average, corrective surgery of both free-dripping fistulas and catheters takes 2–4 hours, but has been known to take up to 7 hours. The number of cotton swabs used in the operation is counted before using and recounted before closing the abdomen to make sure that none are left behind in the bear’s stomach. Tissue samples are collected for pathological analysis in the U.S. and the UK.

When the operation is completed, the bear is injected with a drug to partially reverse the anesthetics and allow the bear to recover faster. At the end of surgery, all bears receive an injection of pain killer that will last for 24 hours. The day after surgery they are started on oral pain-killers, which they take for the next 3–4 days. All bears are sprayed with Frontline, an insecticide solution, before returning to their wards for recovery. During the next 14–21 days the bears receive intensive care at the hospital.

### **Severely Stereotypic Bears**

While all rescued farm bears display behaviors that are context-free and devoid of external stimulation, 5–10% of the bears are found to be severely stereotypic. When necessary, the center’s veterinary team uses drugs (e.g., zuclopenthixol) to modify psychotic behavior before and after corrective surgery. As Dr. Cochrane commented to the author, the center uses both veterinary care and an enriched environment to help reduce the self-destructive behaviors. Medication is only used as a last resort.

### **Terminally Ill Bears**

The center’s veterinary team follows a humane practice that is gaining acceptance in the world of captive animal care. When an animal is terminally ill and has no prospect of recovery, euthanasia is chosen to end suffering. At the Chengdu Rescue Center, the decision to euthanize is a difficult one. At such a time, Jill Robinson is brought into the decision-making process. Together, she and the veterinary team decide the best option for the animal in question. Bears euthanized thus far had irreparable physical and mental problems, such as massive tumor formation in the liver, peritonitis, pathologically enlarged kidneys (one bear), or self-mutilation (one bear). Euthanized bears are cremated and laid to rest in a special cemetery at the center. (In contrast, terminally ill bears on the farms or those that have outlived their “usefulness” are let die without food or water, or are slaughtered for their flesh [sold as beef to unsuspecting customers], hide, gallbladder, and other parts such as bones [Interview with former farm owners 2004]).

### **Physical Therapy**

Some form of physical therapy is implemented for most rescued animals that are injured or recovering from corrective



**Top, the Rehab Zone enclosures at the Chengdu Rescue Center.**

**Bottom: A rehabilitated bear plays.**

surgeries (Bromiley and Haussler 1999, Taylor 2004). Among the objectives of physical therapy are early resolution of inflammation, prevention or gradual elimination of muscle atrophy, and restoration of bodily functions (Taylor 2004). Physical therapy at the Chengdu Rescue Center is necessary both for the bears' full recovery from the corrective surgery and for recovery of their lost physical strength and limb functions. The rescued bears suffer from varying degrees of muscle atrophy. Some are diagnosed with arthritis, in addition to cracked (hyperkeratotic) foot pads and significantly weakened limbs due to years of confinement in the small cages.

Physical therapy takes place at the Rehab Zone, where bears recovering from corrective surgery are for the first time freed from cages. Bears begin exploring their spacious dens, taking slow and cautious steps in the first few hours after they are released from the transport cages. The Rehab Zone enclosure, complete with vertical and horizontal enrichment structures, invites the bears to use different body postures in their efforts to investigate objects, forage for food, and play with each other. Center workers use fruits or honey to lure the bears to stretch their limbs in order to reach the foods. The 3 to 6 months of physical therapy produces conspicuous results. At the time of

this field study, no bears in the Rehab Zone showed any signs of physical difficulty.

### Enriched Captive Animal Care

Studies in the last 20 years have stressed the importance of environmental and behavioral enrichments for captive animals. "The greater the departure of the captive environment from the natural situation, the more critical each attribute of the enclosure becomes in terms of meeting the animal's needs," states a special guideline for the care of captive nonhuman primates (IPS Captive Care and Breeding Committee 1993). As a measure to improve the captive environment, enrichment programs are receiving more attention by zoos and other institutions holding wild animals worldwide. An enriched environment is believed to encourage captive animals to exhibit natural behaviors, and such behaviors are considered good for conservation, display, and welfare purposes. One study recommends four types of enrichments that cater to the needs of different species. These include a complex environment, indestructible toys, destructible toys, and "work for food rewards" (Cocks et al. 1999).

At the Chengdu Rescue Center, structural and behavioral enrichments are implemented for the following purposes:

- Reduce boredom and under-stimulation
- Encourage the captive animals to display its normal repertoire of behaviors, namely walking, climbing, jumping, and running
- Encourage physiotherapy to restore muscle strengths and bodily flexibility
- Encourage and sustain curiosity with new objects
- Encourage individual confidence and enjoyment of life through the provision of positive reinforcements (Electronic interview with Jill Robinson 2004).

The center's enrichment program highlights space, natural and artificial structures, and a food-enrichment routine.

### Space

Freedom for the bears to display their natural behaviors requires adequate space, and this was incorporated into the design of the center's bear dens and enclosures. Covered dens and open enclosures are provided in the Rehab Zone, Rupert's House, and the Bamboo Forest (permanent living quarters).

At the Rehab Zone, there are seven dens, each measuring 4 m x 4 m x 3.5m. The enclosure is 30 m x 40 m (1200 m<sup>2</sup>). It has two perimeter fences, comprising an inner electric fence with seven strands to a height of 1.20 m and an outer chain link fence measuring 2.5 m tall with an inward-sloping 1 m metal baffle plate. Each den is equipped with four steel hammocks of different heights assigned to four bears of comparable size and temperament. Group formation is done in such a way to reduce the likelihood of weak bears being exposed to considerable risk of aggression or other types of abuse by the more dominant ones. The den floor is made of concrete for easy cleaning and drainage. In January 2004 there were 34 bears at the Rehab Zone that were out in the enclosure at different times in the morning and afternoon, for a total of 6 hours daily.

At Rupert's House, the den size is the same as those in the Rehab Zone. Rupert's House also has three dens built for

**TABLE 1: COMPARISON OF SPACE PER BEAR ON THE BEAR FARM AND AT CHENGDU ASIATIC BLACK BEAR RESCUE CENTER**

Average space/bear on the farm	REHAB ZONE (34 BEARS)		PERMANENT LIVING QUARTERS (FULL CAPACITY OF 48 BEARS)		RUPERT'S HOUSE (FULL CAPACITY OF 4 BEARS)	
	Den space/bear	Enclosure space/bear	Den space/bear	Enclosure space/bear	Den space/bear	Enclosure space/bear
0.53 m <sup>3</sup> *	12 m <sup>3</sup>	33 m <sup>2</sup>	12 m <sup>3</sup>	112 m <sup>2</sup>	24 m <sup>3</sup>	72 m <sup>2</sup>

\* 0.53 m<sup>3</sup> is the average cage size of the 33 bears (of a total of 37) rescued and brought to the Chengdu Rescue Center in November 2003. The average size of 0.53 m<sup>3</sup> is barely larger than the size of the body of many farm bears.

special-needs bears. The dens back to an enclosure of 288 m<sup>2</sup>. No electric fence is installed in this enclosure.

There are two separate zones in the Bamboo Forest, i.e., Zone 2 and Zone 3, each having a separate house with six dens. The individual dens measure 4 m x 5 m x ~3.5 m tall. Four bears are assigned to each den at the permanent living quarters. Zone 2 was home to 21 bears at the time of this study. The zone has a heavily wooded and natural enclosure of some 3,205 m<sup>2</sup>. Zone 3 was home to 17 bears that go out to a smaller enclosure (about 2,160 m<sup>2</sup>) on a daily basis. Both enclosures are surrounded with double fences.

In terms of space, the rescued bears are provided with a qualitatively improved environment that allows them the opportunity to assume any ursine position. Table 1 provides a comparison of their command of space at the Chengdu Rescue Center and the deprived space they had on the bear farms.

#### Enrichment Structures and Objects

Space alone does not equate with an enriched environment. "Size of enclosure is only of significance in terms of usable space and complexity within it...thus the quantity of space provided is less important than its quality" (IPS Captive Care and Breeding Committee 1993). Therefore, more attention should be given to the installation of enrichment structures and provision of toys to captive animals (*Laboratory Primate Newsletter* 2001, Lai and Menon 2003, Cocks et al. 1999). For example, a study on captive polar bear care recommends the provision of manipulable nonfood objects to prolong the animals' appetitive behaviors (Altman 2000).

The Chengdu Rescue Center has made noticeable efforts to enrich the environment. The center is situated in a thick bamboo forest; additionally, it has provided artificial structures and objects to the bears, as detailed in the following lists:

#### *Artificial and constructed structures and natural objects*

- A raised wooden platform (about 1.5 m from the ground) with wooden climbing frames and a hanging used rubber tire
- Vertical logs for climbing and balancing on top

- A picnic table with benches
- A sand pit
- A swimming pool and an adjacent shower
- Lawn, grown trees, bamboos, and shrubs

#### *Destructible toys*

- Straw pyramids for pulling apart
- Varieties of plant leaves such as banana leaves, sweet potato leaves, and browse
- Whole cabbages, which double as items of play and food
- Sawdust mounds

#### *Indestructible toys*

- Bamboo toys and bamboo poles with holes that allow raisins and other treats to fall out
- Hollowed-out hard plastics toys in various shapes, from football-sized to drum-sized, for containing treats
- Rubber tires, both freely on the ground and suspended by a rope for swinging on
- Rock boulders for rolling or finding insects underneath
- Kong (i.e., reinforced-rubber dog toys)

At the time of this study (January 2004), except for a swimming pool in Zone 3, artificial structures are limited in the two enclosures of the permanent living quarters. The lack of enrichment structures in the two huge enclosures is perhaps attributable to the fact that both are heavily wooded with mostly bamboos, mature trees, shrubs, and other vegetation native to the Chengdu region. And, due to the thick vegetation and mild climate throughout the year, the two enclosures are home to variety of small mammals, insects, reptiles, and birds that attract the bears' attention. According to the center's workers, bears engage in different ursine behaviors in the enclosure, and some of them enjoy breaking the bamboos at mid-length. Bears are also spotted eating small mammals (Electronic interview with Claire Smith, 7 May 2004). Both destructible and indestructible toys are provided and rotated at the permanent living quarters.

As Jill Robinson disclosed in August 2004, enrichment structures have already been added to these two enclosures.

**“Working for Food” Reward**

Food enrichment has two inseparable elements: varieties of food and methods of delivery. Animals in the wild spend large amounts of their waking hours searching for food. Studies suggest that monkeys spend up to 40% of their time feeding; giant pandas spend more than 80% of their time searching for tender bamboo leaves and eating. In contrast, animals in captivity are generally fed large amounts that are easily accessible. They are, therefore, left with large periods of time feeling bored in the often-barren environment. At the Chengdu Rescue Center, a food-enrichment program is implemented at the Rehab Zone and the Bamboo Forest. A food-enrichment calendar details the varieties of food, times of provision, and methods of delivery for each day.

The center provides the bears with a cereal-based bear meal ordered from a local poultry food processing plant. The meal, made in strict compliance with AAF’s requirements, contains rich vitamins and mineral elements. Boiled egg is provided to bears in the Quarantine Zone and in the hospital. Varieties of fresh fruits, nuts, dried fruits, and vegetables are also served with the two major meals each day and in three daily snack times. In addition, fruit juice, Tang, yoghurt, canned fruits, fish paste, peanut butter, honey, cooked and flavored rice, and other foods are provided. Importantly, food is provided multiple times and in smaller amounts. The menu at the Chengdu Rescue Center is a huge contrast to the bear diet on the farms. As my interview with the former owners of a closed bear farm confirmed, farm



**Rescued bears in the permanent housing facility following rehabilitation.**

bears are generally fed a vitamin-poor corn mash twice a day. Although seasonal vegetables and a variety of fruits and nuts are readily available in Sichuan throughout the year, farm owners deny these varieties to the bears. “They cannot be fed too well,” the former farm owners said. “Well-fed bears do not produce enough bile because it is used to digest good food” (Interview with the former farm owners 2004).

At the center, different methods are used to deliver food to the bears in an attempt to prolong the feeding time, stimulate the bears’ senses, encourage the use of different feeding pos-

**TABLE 2: FOOD ENRICHMENT CALENDAR (3-DAY COMPARISON) AT THE CHENGDU ASIATIC BLACK BEAR RESCUE CENTER**

<b>1<sup>st</sup> day of month</b>	<b>2<sup>nd</sup> day of month</b>	<b>3<sup>rd</sup> day of month</b>
<b>IN THE BEAR DENS:</b> 10:15 a.m. — banana palm 11:30 a.m. — bamboo treats, fruit 2:15 p.m. — iceblocks 4:00 p.m. — box treats, vegetables 5:30 p.m. — bamboo branches	<b>IN THE BEAR DENS:</b> 10:15 a.m. — treat tubes 11:30 a.m. — Kongs, vegetables 2:15 p.m. — sugar cane 4:00 p.m. — iceblocks 5:30 p.m. — nu zhen (a local plant)	<b>IN THE BEAR DENS:</b> 10:15 a.m. — box treats: cereal 11:30 a.m. — lotus roots 2:15 p.m. — log treats, cartons 4:00 p.m. — pumpkin 5:30 p.m. — willow branches
<b>IN THE ENCLOSURE:</b> 9:30 a.m. — scatter nuts/seeds mix, rice, place box treats, oil spray, banana palm 3:15 p.m. — bamboo branches, cereal, melon, pumpkin pieces	<b>IN THE ENCLOSURE:</b> 9:30 a.m. — dried leaves (piles), herbs/spices, scatter fruit/vegetables, sugar cane 3:15 p.m. — bear toys, dried fruit nu zhen, treat tubes, yoghurt drizzles	<b>IN THE ENCLOSURE:</b> 9:30 a.m. — tree stumps, toys, wood shavings, lotus roots, rice, melon 3:15 p.m. — smears, scatter nuts/seeds, willow branches, scatter fruit/vegetables, oil spray



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Rehabilitated bears play in the Rehab Zone enclosure.

tures (digging, standing, and stretching to reach food hanging overhead or hidden underneath), and engage them in environmentally directed behaviors. For example, meals are scattered in the dens or in the enclosure. Nuts, dried fruits, and seeds are placed in bamboo trunks, tubes, small wood logs, or carton boxes. Pieces of fruit are hidden under the bushes and logs, in the raised wooden platform, or in a stack of dry hay. Ice-blocks

made of fruit juices and Tang, or frozen with seasonal vegetables and fresh fruits are provided. Center workers use syringes to inject yoghurt on different surfaces such as logs, ground, holes, walls, and baskets. Honey, peanut butter, jam, fish paste, and other liquid foods are thinly spread on vegetables and a range of other surfaces at different levels. Essential oils diluted in water are sprayed around the enclosure or in the den to stimulate the bears' senses. Locally grown seasonal herbs are also used for this purpose; for example, fresh garlic is rubbed on the wall or logs to engage the bears in intensive sniffing games (Electronic interview with Jill Robinson 2004).

### Results and Limitations

The Chengdu Rescue Center improves the physical and mental conditions of rescued farm bears so that they can live the remainder of their lives in a deprivation- and infliction-free environment. The center is a permanent sanctuary and, as such, it has never sought to return the rehabilitated bears to the wild. To evaluate the effectiveness of the center's postrescue care, we need to refer to the objective of its care programs.

### Physical Health Improvements

Since the center opened in 2000, it has accepted 139 bears. At the time of this study, 116 bears were in its care. Of the 85 bears that had undergone corrective surgery by the end of 2002, 82 bears—more than 95%—survived for more than a year. This is an impressive survival rate compared with the reported 20%–40% death rate on the farm in the first year of bile extraction.

My observation of the bears in the Rehab Zone and the permanent living quarters (i.e., bears have been at the center 3 months–3 years) confirmed the noticeable improvement of the bears' physical conditions. I based my observation on factors such as agility of movement, qualities of bear hair, level of activity, degree of socialization, and bear size. The bears in both locations are active, explorative, and move with no observable difficulties. While observations made over the course of just 6 days may not be accurate, the center's veterinary team confirmed that the bears are in good health.

Weight gain or loss within a specific period of time can be an indicator of improved or declining health. As Dr. Cochrane commented, sudden weight loss as a result of behavioral change and appetite loss often indicates the existence of severe health problems. Books on farming bears concur that behavioral change and appetite loss are symptoms of illness such as pneumonia, diarrhea, and parasites in the bear's body (Zhang 2001). While there are no weight data on the bears after their corrective surgery if afterwards they have had no reason to receive medical attention, bear weight is monitored visually by the veterinary nurses and the bear keepers. Weight loss was reported on a small number of bears. Those with drastic weight loss over a short period of time are usually moved into the hospital for emergency veterinary attention. For example, Bear 6 was reportedly unusually lethargic, getting up late in the morning, not returning to den for a few nights, having no appetite, and decreasing in body weight. Veterinary examination confirmed that the bear was suffering from a tumor (about 1 kg) at the liver area.

At the time of this study, all 42 bears at the Rehab Zone and 36 bears (except Bear 6, who was euthanized due to the

**TABLE 3: LIST OF BEHAVIORS OF BEARS AT THE REHAB ZONE AND BAMBOO FOREST  
(BASED ON A TOTAL OF 12 HOURS' OBSERVATION IN JANUARY 2004)**

BEHAVIORS	REHAB ENCLOSURE	BAMBOO FOREST	COMMENTS
Foraging for food	Yes	Yes	----
Eating	Yes	Yes	----
Investigating objects	Yes	Yes	----
Playing and chasing (mounting) each other	Yes	Yes	----
Playing with toys	Yes	Yes	----
Tree climbing	No	Yes	----
Tree breaking	No	No	----
Bathing in the sun and napping	Yes	Yes	----
Context-free weaving	No	Yes (one bear)	Bear 19 was weaving outside his closed den door on two afternoons
Self-mutilation	No	No	----

liver tumor) at the Bamboo Forest, were in good health, as judged by their behaviors, appetite, and appearances. Even though 19 bears at the Rehab Zone were permanently handicapped by their past injuries and moved with difficulty, they looked normal and displayed behaviors that their handicapped conditions allowed them to. The results of the corrective surgery were impressive. "By removing the damaged gallbladder, foreign objects, and the abscesses that could cause problems, and fixing the abdominal hernia problem, we are almost sure that these bears after the surgery will live a pain-free life," commented Dr. Cochrane. The bears' thick and shining fur and their level of activities even during winter suggest general good health.

#### **Reduction of Context-Free Behaviors**

Stereotype behaviors are detectable in all farm bears. Yet, according to Dr. Cochrane, context-free behaviors such as weaving disappear among 90% of the bears in the Rehab Zone and the Bamboo Forest. Yet, moderately stereotype behaviors are still seen among 5%-10% of the bears at the center, most often before meal time or when they want to get out to the enclosure or get in their dens. My observation of the bears in these enclosures confirms Dr. Cochrane's observation. I did not witness any stereotype behaviors at the Rehab Zone. Bears spent most of their time in the enclosure foraging for food, playing with toys, and chasing each other; on 3 days, one bear attempted to mount another. Other behaviors included exploring objects and

lying on the raised platforms or on the grass taking a nap.

At the Bamboo Forest, the thick vegetation makes observation difficult. Although I could only see about 10 bears that stayed close to the fence in each of the forest's two zones, I did observe, on 2 separate days, one bear weaving outside a closed den door. The weaving lasted the entire 1-hour period of my observation. Apparently, this bear wanted to get back to its den before it was supposed to. During this study, Bears 19 and 30 were reported as exhibiting stereotype behaviors at the center's weekly staff meeting. Bear 19 was spotted pacing near the electric fence, and Bear 30 was pacing next to the food on the enclosure ground. Half of the bears in the Bamboo Forest disappear in the thick bamboos that cover about 85% of the enclosures. Some can be found making comfortable nests under the lush bamboo branches. Many enjoy breaking bamboos at mid-length. I did not observe bears doing this, however, I did notice areas of the forests where the bamboo had been impacted by bear activities. As in the Rehab enclosure, most bears I could watch were exploring and investigating objects. One bear was particularly fond of a rubber ball and played with it in a variety of positions.

It should be noted that, during the time of this study (i.e., winter), bears in both enclosures did not appear bored. According to a center worker, the bears are relatively more active during the spring and summer, when varieties of wild plants and assorted insects, reptiles, and small mammals attract their

attention. Table 3 lists observed behaviors in the Rehab Zone and the Bamboo Forest.

Jill Robinson, who spends one-third of her time each year at the Chengdu Rescue Center, summarized her observations of bear behaviors in the enclosure as follows:

...I notice that there is voracious feeding for most, if not all of them for the first 20–30 minutes. During this time, there is frantic running around, snatching the most obvious food they see and find, “warning” vocalizations to other bears, and occasional “mouthing,” which generally only results in the less dominant bear giving in and scuttling away. This behavior reduces as they all become more sated. At this time many then go into foraging mode for perhaps another 20 minutes or so, passing up the food they don’t really like and becoming more selective. Finally, they will move into a grazing pattern (i.e., of grass as they lie down), and opportunist feeding (i.e. if they see or smell something they originally missed!) for the rest of the morning or afternoon, interspersed with play and sleep. At this stage we often see them playing with some of the food that wasn’t their favorite—cabbage leaves for example. The enrichment toys double up, both providing a tasty treat when filled with nuts and dried fruit and becoming something to lie back and play with. The toys work well in keeping them occupied and amused for varying degrees of time. Every now and then, they might get lucky too—with the odd raisin falling out! (Conversation with Jill Robinson 2004).

Two of the severely mentally disturbed bears that arrived with the group in November 2003 have been given zuclopenthixol to control their behavior. Dr. Cochrane was concerned about the stressful effects of moving the bears between quarantine and hospital and subsequent abdominal surgery, and that the bears would possibly develop a pattern of self-mutilation. The drug so far has proven to decrease the anxiety of these bears and no self-mutilation has been observed. The bears have calmed down and are behaving in a more normal manner appropriate for their surroundings. Generally, when bears are moved to the Rehab Zone, their context-free behaviors are significantly reduced as a result of socialization, enrichments, and space of movement, but can sometimes persist in a small number of bears (fewer than 10%).

### Limitations

The foregoing discussion shows that rescued Chinese farm bears are a special group of wild animals. Physically, mentally, and from a moral standpoint, they are not eligible for returning to the wild. When bears arrive at the Chengdu Rescue Center, they are frightened, aggressive, and clearly afraid of people. Following intensive nursing care in the pain-free new environment, the bears become more relaxed through association of kind treatment from people. Ultimately, most are not afraid of people. They seem to care very little whether they are being watched or not.

Despite world-class veterinary care, the damage caused by the crude surgery procedures performed on the farms cannot be corrected among a small number of bears. One bear named Max was found to have peritonitis at the time of the corrective surgery, and he was put on treatment for the illness. Subsequent blood tests showed results within the normal bear range. However, 6 months after the surgery, Max was noted with a

decrease in appetite and with significant behavioral change. He was taken into the hospital for exploratory surgery, where it was found that the peritonitis had returned. It was apparent that the original peritonitis could not be completely eliminated, and Max was euthanized. Regarding another bear, Sam, no peritonitis was observed during the corrective surgery. But, 2.5 years later, he was seen with decreasing weight, loss of appetite, and behavioral changes. At the exploratory surgery, Sam was diagnosed with peritonitis involving the mesentery, and he had to be euthanized.

The center’s management and staff found that some bears in the permanent living quarters want to return to their dens before they are called in by bells. This phenomenon needs further study to determine whether the bears come inside because it’s shady and cool, and often gives them a sense of security. It is clear, however, that the bears are not rejecting the concrete dens. Years of confinement on the farm may have accustomed the bears with life in artificial settings such as the dens. China’s farm bears come from two sources: breeding farms and wildlife traders who catch bears in the wild. The artificially farmed bears grow up in concrete dens and concrete enclosures. They are bred as bile bears and have no past connections with bears’ wild habitats. Many of those caught in the wild as young bears have also become used to the barren environment of the bear farms. Additionally, many of the captured wild bears have either lost the physical fitness with missing limbs or forgotten the skills needed for survival in the wild. No enrichment program, however complete, can reverse the bears’ physical traumas.

Despite the conscientious efforts at the Chengdu Rescue Center to provide an enriched environment for the bears, stereotype behaviors persist among 10% of the bears. A very small number of the bears display moderate to serious context-free behaviors. That some bears continue to act abnormally in the natural enclosure of the Bamboo Forest suggests that no enrichment program could eradicate acts caused by mental disorder.

Morally, the rescued bears cannot be returned to the wild for two other reasons. China’s bear farming continues in the province of Sichuan and elsewhere. Released bears could easily fall victim to poachers who profit from illegal bear capture and sale to bear farms. Further, human activities impact even the most remote areas of the country. Like American black bears (*Ursus americanus*), Asiatic black bears need a big home range to forage for food. The fragmentation of even the giant panda reserves is indicative of the fragmented mountainous ranges bears call home. Their survival in the wild can be a comprehensive challenge.

### Management, Conservation and Policy Implications

The Chengdu Asiatic Black Bear Rescue Center is the antithesis of most captive-animal institutions in China. With its spacious bear dens, enclosures, world-class veterinary care, happy bears, and clean and sanitary conditions, the center commands respect. Its experiences in rehabilitating rescued farm bears should serve as a catalyst for a radical change in China’s captive-animal management, wildlife conservation practices, and policies regarding animal protection.



**Bears foraging for food in the Rehab Zone enclosure.**

China's captive-animal management is considered half a century behind the world humane development (Electronic interview with Merritt Clifton, chief editor of *Animal People*, 20 January 2004). Many of China's animal-holding institutions have been described as a "typical miserable hellhole," "a matter of shame for China," "world's worst zoos," and "another miserable tribute to human's inhumanity" (Wedderburn 2004). Most mainland Chinese zoos offer their animals no enrichment, and visitors never fail to see "rows and rows of identical menagerie-style concrete and iron cages housing miserable zoochotic animals" (Wedderburn 2004). Not only are animals dying of severe food deprivation, some facilities encourage visitors to engage in cruel acts such as live feeding and using live animals as shooting targets. As Dr. John Wedderburn, a Hong Kong-based animal rights researcher and advocate, observed in the zoos he visited, "practically every visitor shouted and banged to watch the fright reaction" from the animals. In one of my own visit to a zoo in southeast China's Nanchang City, I was shocked to see an army soldier spit at a giant panda frantically pacing in an extremely small and totally barren pit enclosure. Isn't poor management of the zoos partially responsible for the uncivilized acts among the visitors?

The Chengdu Rescue Center's experience demonstrates the limitations of any postrescue care to imprinted wild animals. While most bears enjoy their newfound freedom in the natural enclosures of the center's Bamboo Forest, a small number are observed to return to their dens earlier than they are supposed to. Apparently, the artificial structures are not unacceptable to them due to years of close contact with humans and human environment. What does this behavior suggest to the many so-called conservation projects involved in wildlife breeding, for example, Siberian tigers in China? How can these projects succeed in their goals of eventually returning the animals to their natural habitats, if these animals are used as "exhibits" and at the same time have daily contact not only with their keepers but visitors who live feed them?

The Chengdu Rescue Center is managed according to the latest welfare recommendations being implemented by animal institutions in many countries. In contrast, most of mainland China's captive-animal institutions lack such standards. Many of China's private zoos are not members of the Chinese Zoologi-

cal Association (CZA), a government organization for guiding zoological gardens. Regrettably, CZA has shown no interest in joining the Southeast Asian Zoological Association (SEAZA), which seeks to improve captive-animal care throughout the region (Pers. comm. with Dr. G. Agoramoorthy, one of the chief architects of SEAZA).

This situation indicates that the Chinese government is not yet prepared to introduce the international standards for captive-animal care. Yet the bears at the Chengdu Rescue Center bear testimony to the need for the Chinese authorities to change the country's animal welfare policies. According to the Wildlife Protection Law passed in 1988, Asiatic black bears are a state-protected species. However, the law only provides protection to bears in the wild; it does not cover bears on the breeding farms and those used in the bile-extraction business. While the law penalizes acts that result in the death of state-protected species in the wild, it contains no articles against acts of cruelty against these animals. Cruelty inflicted upon the farm bears had long been ignored by the farm owners and local officials because it is not punishable under existing law. Chinese legal experts and animal advocates have worked hard to get the government to revise the Wildlife Protection Law so that it will also cover wild animals in captivity (Wu 2003; Li, X. X., 2003) and include anticruelty articles.

Regrettably, there are currently no signs to suggest that the Chinese government is ready to adopt a comprehensive animal welfare law, which would have an adverse impact on the many profit-making businesses dealing in wild or domesticated animals, and which would be difficult to enforce in a country where cruelty to animals is so widespread. However, separate welfare legislations on animals in different roles (e.g., entertainment, testing, working) should not be ruled out.

## **Conclusions**

No rescue efforts can achieve the release of the more than 7000 bears still behind bars in the more than 240 bear farms in Sichuan and other provinces across the Chinese mainland. The Chengdu Asiatic Black Bear Rescue Center and the China Bear Rescue Campaign have, however, provided some hope. While the center has brought into the heartland of the Chinese mainland new concepts, standards, and practices of captive-animal care, its influence reaches much further.

First, it directly challenges the fundamentals of bear farming. The rescued bears at the center are testimony to the intrinsic cruelty of the farming operation. Bear farming is not an "improvable" operation, as the center's rehabilitation records have shown. "Empty cages, not larger cages" is the only solution to the farm bears' plight. The financial resources needed to rescue all 7000 farm bears are staggering, as is the level of resistance that would be encountered.

Second, the Chengdu Rescue Center offers an alternative management model for China's captive-animal institutions. It emphasizes the importance of adopting the world's latest welfare recommendations for animal care, providing animals in captivity a decent environment, and catering to their health and mental needs. Instituting a respectful captive-animal environment not only serves the welfare of the animals, it also fosters decency and respect among the humans in frequent

or occasional contact with the animals. China is making great strides economically. However, modernization cannot be singularly defined as economic growth and the accumulation of wealth. A modern society cannot be a hell hole for its nonhuman animals.

Finally, as the antithesis of most other Chinese captive animal holding institutions, the Chengdu Rescue Center stands for a radical change in the Chinese official position on animal welfare. The persistence of the bear farming operation and the level of suffering on the bear farms are results of the lack of an anti-cruelty law on the Chinese mainland, a policy area that is more than 180 years behind world humane progress. Admittedly, what the center faces is not only the passivity of the Chinese government on the issue of animal welfare legislation. It is operating in a country that is yet to redefine the relations between humans and other animals. Regardless of the challenge, the Chengdu Rescue Center is making an impact in its own way.

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