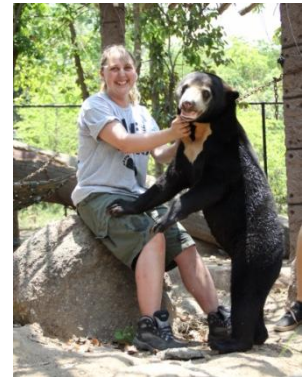


Report:

Royal Zoological Society of Scotland Veterinary Visit to Free the Bears Phnom Tamao Wildlife Rescue Centre Cambodia April 2010

Royal Zoological Society of Scotland (RZSS) veterinary surgeon Romain Pizzi, head veterinary nurse Donna Brown and senior carnivore section keeper Sharon Hatton made a two week RZSS sponsored trip to Phnom Tamao Wildlife rescue centre in Cambodia at the invitation of Free The Bears Inc. The government run centre is approximately an hour drive south of the Cambodia capital Phnom Penh, and holds over 1200 animals ranging from reptiles such as Siamese crocodiles, birds such as Sarus cranes and Storks, small mammals such as leopard cats and Asian short clawed otters, to large mammals including Asian elephants, tigers, and leopards. Free The Bears Fund Inc. currently runs the bear sanctuary section which cares for over 106 rescued bears, 76 of which are Sun bears, with the remainder being Asiatic black bears. This is the world's largest single population of captive sun bears.

The trip included 8 days of intensive training, discussions, as well as anaesthesia, dentistry, and surgical treatment of cases under anaesthesia, which were attended by the 3 Cambodian veterinarians from the Phnom Tamao centre, 2 Vietnamese veterinarians from Cu Chi Wildlife Rescue Station and the Mekong Delta Bear Sanctuary, and Free the Bears Fund Inc.'s European trained veterinarian and veterinary nurse. Management, husbandry, enclosure design and diets in use at the sanctuary were studied and discussed by Sharon Hatton in preparation for the Royal Zoological Society of Scotland provision of a home for two adult male sun bears that are unsuitable for release to the wild. A number of dental instruments, inhalant anaesthetic circuits and anaesthetic equipment were donated by the RZSS, as well as books donated by the British Small Animal Veterinary Association (BSAVA).



Figures: a) Romain Pizzi performing surgery on an Asiatic black bear b) Donna Brown teaching inhalant anaesthesia principles to Cambodian and Vietnamese wildlife veterinarians c) Sharron Hatton up close with a young rescued sun bear while assessing husbandry, training, and management of the world's largest group of rescued sun bears

Summary of Procedures

	<u>Sun bears</u>	<u>Asiatic Black Bears</u>	<u>Total Bears</u>
Anaesthesia	6	5	11
Surgical wound reconstruction	1	-	1
Diagnostic surgery	1	1	2
Flexible diagnostic upper GIT endoscopy	-	1	1
Dental treatment and extractions	3	4	7
Chest x-rays	2	-	2
Bronchoalveolar lavage	1	-	1

Other Tasks Accomplished

	<u>Cambodia</u>	<u>Vietnam</u>	<u>Total</u>
Bear rescue centres visited	1	3	4
Anaesthetic machines made functional	1	1	2

x-ray machines repaired

1

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1

Training provided:

- Immobilisation and injectable anaesthesia protocols
- Inhalant anaesthesia in bears
- Use and maintenance of the anaesthetic machine and equipment
- Dental examination and charting
- Performing extractions of fractured canines in bears
- Peri-operative pain control and analgesia
- Suture use and wound management in wildlife



Panoramic view of one of the Free the Bears enclosures at Phnom Tamao wildlife rescue centre Cambodia

Details of specific clinical cases

Dental treatment of 3 sun bears and 4 Asiatic black bears

Fractured canines are unfortunately a common problem in rescued bears. Bears may break these teeth due to years of confinement in small metal cages. At the stage these fractured canines are seen, the tooth is commonly devitalised and unsuitable for treatments aimed at saving the tooth such as a root canal procedure. Extraction of these large teeth also requires a specific technique and surgical closure of the deficit. Dental examinations and extractions of fractured canines were performed on 7 bears, and this was used as an opportunity to train the local Cambodian and Vietnamese vets in how to perform the procedure, as well as providing a valuable opportunity in training in the use of inhalant anaesthesia for long procedures and surgery.

Flexible endoscopy in a female Asiatic black bear with a 10 year history of regurgitation after eating

A flexible endoscopic examination was performed under anaesthesia in a female Asiatic black bear that had suffered from regurgitation of food after eating for the 10 years since she had been rescued and brought to the sanctuary. Previous abdominal radiographs (x-rays) had not demonstrated any abnormalities. On flexible endoscopy of the oesophagus (oesophagoscopy), the bear was seen to suffer from a megaesophagus. This is a flabby dilated oesophagus with loss of normal motility, allowing the collection of food in the oesophagus. While this condition is not curable, making a diagnosis will allow the keepers to trial different feeding regimes to help improve this bears quality of life.



Figure a) Extraction of a fractured devitalised canine in a large male Asiatic black bear b) flexible endoscopy of a female black bear with a 10 year history of regurgitation after meals.

Health screening of two male sun bears “Rotana” and “Somnang” for export to Edinburgh Zoo

Two male sun bears “Rotana” and “Somnang” that are destined for a new home at Edinburgh zoo were anaesthetised for health checks, and chest radiographs (x-rays) taken, as well as lung washes performed for bacterial cultures and typing, to ensure they were healthy and free of disease before coming to their new home.

Advanced reconstructive skin surgery in a female sun bear

A 13 year old female sun bear was suffering from a non-healing skin wound for 1&½ years at the centre. She had previously had this wound for a year with the owner who had kept her caged as a pet, before her rescue. Despite numerous courses of antibiotics and previous attempt to suture the wound, the wound had not fully healed. There was extensive scar tissue and skin contracture, making it difficult for this bear to walk or move normally, and she had to be kept restricted in a small enclosure as any increase in her movement resulted in the chronically scarred skin tearing and becoming infected. After diagnostic laparoscopy ruled out any underlying abdominal pathology, a large reconstructive surgery with skin flaps was performed, taking 4 hours operating time. This healed well over the following two weeks and for the first time in 1&½ year, she has started to be able to move more freely without her skin tearing, and she is continuing to improve.

Evidence of bile milking in three Asiatic black bears in Cambodia

Diagnostic surgery was performed in a female Asiatic black bear, one of 3 individuals that had been rescued from a Sino-Khmer business man keeping them as pets close to the Vietnamese border. Several fibrous adhesions were evident between the gallbladder and body wall, consistent with these bears having been periodically milked for bile by needle puncture. This is the first report of bears milked for bile in Cambodia (bear bile milking is illegal in Cambodia).



Other sites visited

Mekong Delta Bear Sanctuary, Free the Bears Fund & Wildlife At Risk, Vietnam



Cu Chi Wildlife Rescue Station, Wildlife At Risk, Vietnam

Cat Tien Bear Sanctuary, Free The Bears Fund & Wildlife At Risk, Cat Tien National Park, Vietnam

Undercover visits were also made to see Asiatic black bears, kept in poor conditions in a large amusement park in Vietnam. The bears were showing strong stereotypic behaviour and the small restrictive cages were highly suspect for the bears being regularly milked for bile. An undercover visit was also made to see Asiatic black bears, again kept in poor conditions, in small cages behind a restaurant in Ho Chi Minh City Vietnam. Undercover film footage was obtained to document the poor conditions and welfare concerns of these bears.



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Press Editors Notes

- The Royal Zoological Society of Scotland (RZSS) is a registered Charity that operates Edinburgh zoo and the Highland Wildlife Park, as well as being involved in numerous national and International conservation, education and research projects www.edinburghzoo.org.uk
- Free The Bears Fund Inc. is a registered charity caring for rescued bears in dedicated sanctuaries in India, Cambodia, Laos, and Vietnam www.freethebears.org.au
- The Asiatic black bear (*Ursus thibetanus*) and Sun bear (*helarctos malayanus*) are both classified as vulnerable by the International Union for the Conservation of Nature (IUCN).
- Sun bears are the smallest species of bear in the world. They have especially powerful teeth and claws used to tearing into logs and trunks to search for insects and grubs to eat, and are very adept climbers. They are mainly trapped as cubs for pets or killed for food.
- Asiatic Black Bears have a long thick woolly coat, but despite this are well adapted to the hot climate of their habitat. They are threatened by trapping for bear Bile farms in China, Korea and Vietnam. Bears may also be killed for food such as bear paw soup, or in conflict with humans. Cubs are also taken from the wild for pets.
- Bear bile is used for traditional Chinese medicine and to make bear bile wine. Welfare standards are very poor, with bears kept in tiny cages and restrained to drain their gallbladders frequently with a long needle. Bears farmed for bile also have a high occurrence of developing gallbladder stones, infections, polyps, and abdominal abscesses. Malignant gallbladder and liver tumours frequently develop later in life and are believed due to the chronic inflammation caused by draining bile with needles or cannulas.
- While there is no bear bile farming in Cambodia, trapped bears are smuggled across the border and sold to bear bile farms in Vietnam.
- The RZSS is the only Zoological Society in the UK to have two Royal College of Veterinary Surgeons recognised Specialists in Zoo & Wildlife Medicine
- Simon Girling, Royal College of Veterinary Surgeons recognised specialist in Zoo & Wildlife Medicine, is the Head of the RZSS Veterinary Service, with responsibility for the health and treatment of all animals at both zoos, as well as the RZSS numerous conservation projects in the UK and all over the world.
- Romain Pizzi is the RZSS Specialist Surgeon, and with other members of the veterinary service has pioneered several keyhole surgery techniques in zoo and wildlife species.