

OVER 100 DIFFERENT HOOF STOCK SPECIES HAVE BEEN TREATED IN THE TAMER™

- Javan Banteng
- Water Buffalo
- Ankole Cattle
- Bison (yearlings)
- Kenyan Dik-dik
- Zulu Suni
- Klipspringer
- Southern Steenbok
- Greater Kudu
- Lesser Kudu
- East African Bongo
- Sitatunga
- Kob
- Blackbuck
- Blesbok
- Bontebok
- Topi
- Cape Hartebeest
- Indian Nilgai
- Gemsbok
- Addax
- Nile Lechwe
- Vaal Rhebok
- Defassa Waterbuck
- White-Bearded Gnu
- Fringe-Eared Oryx
- Arabian Oryx
- Scimitar Oryx
- Beisa Oryx
- African Springbok
- Roosevelt's Gazelle
- Cuvier's Gazelle
- Red-Fronted Gazelle
- Dama Gazelle
- Mhorr Gazelle
- Dorcas Gazelle
- Slender-Horned Gazelle
- Thomson's Gazelle
- Nubian Soemmerring's Gazelle
- Burmese Thamin
- Siberian Musk Deer
- Calamian Deer
- Kuhl's Deer
- Barbary Red Deer
- Macneill's Deer
- Persian Fallow Deer
- Western Tufted Deer
- Indian Hog Deer
- White-Lipped Deer
- Axis Deer
- Water-Deer
- European Roe Deer
- Pampas Deer
- Siberian Reindeer
- North Indian Muntjac
- Formosan Reeves' Muntjac
- Przewalski Horse
- Grevy Zebra
- Bactrian Wapiti
- Altai Wapiti
- Giant Eland
- Indian Sambar Barasingha
- Dybowski's Sika
- Mandarin Sika
- Indochinese Sika
- Sable Antelope
- Patterson's Eland
- Impala
- Lowland Nyala
- Greater Kudu
- Mishmi Takin
- Suchuan Takin
- Japanese Serow
- Cretan Wild Goat
- East Caucasian Tur
- Himalayan Tahr
- Turomen Markhor
- Desert Bighorn
- Rocky Mountain Bighorn
- Nilgiri Tahr
- Transcaspian Urial
- Chinese Bharal
- Barbary Sheep
- Ibex
- Mouflon
- Snow Sheep
- Llama
- Guanaco



East African Bongo



Himalayan Tahr



Przewalski Horse



Mouflon



Impala



Arabian Oryx



Persian Fallow Deer

MARYLAND ZOO



Location: The Maryland Zoo, Baltimore
Species: Okapi
Equipment: Customized Okapi TAMER™ and alleyway.

Notes:

The Maryland Zoo recently installed an Okapi TAMER™ to help manage their breeding pair of Okapi. The Okapi TAMER™ is a fully padded, mechanical restraint with 18 access doors, a built in full scale, and a smooth glide push panel with friction lock for quick and easy restraint when needed. Mike McClure, general curator, said: “We plan to use the TAMER™ for everything from routine medical procedures (blood draws, health exams, foot care, weights, etc) to any necessary emergency procedures as needed.” Keepers Paula Blair, Amy Demchak, Melanie Crump, and Loren Berry are all using desensitization and operant conditioning to get the okapi accustomed to the TAMER™, all with good results thus far. By training the okapi to be relaxed when in the TAMER™, most veterinary procedures can be done without resorting to risky anesthesia, reducing the stress and cost of these procedures.



Training session with Hiari, a 13 year old male okapi.



Okapi TAMER™ installation



Okapi TAMER™ installation



Location: Micanopy Zoological Preserve, FL
Species: Roan Antelope, Beisa Oryx, Blue Duiker, Suni, Hartebeest, Wilde Beest, Anoa, Greater Kudu, Bongo, Waterbuck and Giraffe.
Equipment: Hydraulic TAMER™, TAMER™ II, Giraffe TAMER™.

Notes:

All of the ungulates at Micanopy are worked through a management facility that includes a Hydraulic TAMER™ and a TAMER™ II.

The TAMER™ 's are adjustable and can accommodate all of the different species at Micanopy. Procedures performed regularly include deworming, blood draws, hood trims, tagging and weighing.

The goal of MZP is to focus on the captive propagation and preservation of rare ungulates and to support conservation projects worldwide.

3 species, 1 TAMER™



For more information about Micanopy, contact Rhudy Holly at rhudy@micanopyzoologicalpreserve.com
For more information about the TAMERS™ at this location, contact Mark MacNamara at faunaresearch@gmail.com

Restraint of Przewalski's in a HYDRAULIC TAMER™

For Reproductive Studies at the
National Zoo's Conservation
and Research Center.



CONDITIONING | INTRODUCTION

Reproductive studies provide critical information on species biology and are the basis for most successful breeding programs in zoological collections. Well designed animal management and handling facilities, appropriate manual restraint equipment used in conjunction with diligent training, and conditioning of animals to research protocols are essential for obtaining meaningful results. The Przewalski horses been the subjects of reproductive studies for over 3 years. Since 2006, 443 full restraints of 9 different horses have been recorded. The facilities restraint equipment (Figure 1), and the training procedures used in these studies are described and presented here. The results of these studies are reported elsewhere.

In order to collect the data for the proposed studies, each horse was conditioned and trained to be temporarily separated from the herd, stopped at various points in the facility, and eventually stopped in the TAMER™ and restrained for various procedures. Initially, the horses were run through the facility with all the doors and stops open. This movement became part of the normal routine. Once completely through the facility, the horses were rewarded with access to a green pasture. Additional rewards, such as apples, were added at strategic points, including entry into the TAMER™.

A description of the National Zoo's Conservation and Research Center (NZZP-CRC) Przewalski horse facility is presented and illustrated a successful layout of pens, alleys, stalls, and a TAMER™. The facility provides good animal flow, safety for keepers and animals, and allows for low stress, repeat handling and the ability to perform a wide array of veterinary procedures. The importance of training and conditioning of the horses to the facility and the restraint equipment is emphasized. The hydraulic TAMER™ allows zoo personnel to handle the horses regularly without the use of chemical immobilization, making it possible to conduct long term research projects, such as reproductive studies that involve repeat rectal palpations, ultrasound exams, hormone injections, and assessments of ovarian activity.

Well designed animal holding and management facilities that incorporate a manual restraint device, such as a TAMER™, are essential for not only basic care and welfare, but also for scientific studies. The facilities at NZZP-CRC and the conditioning of the Przewalski horses by the staff has allowed investigators to develop a research program to help understand the fundamental reproductive biology of the Przewalski horses in a stress-free environment. The ultimate goal is to develop an artificial insemination program for the genetic management of this endangered species.

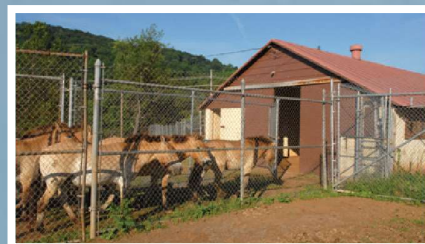
Specifically, the TAMER™ is used for the following procedures:

1. Female reproductive exam - rectal palpation, ultrasound exam, monitoring ovarian activity, pregnancy detection, hormone injections and artificial insemination after inducing standing sedations.
2. Minor veterinary procedures - injection of anesthetics for artificial insemination, and treatments of cuts and abrasions.

The TAMER™ is a hydraulically powered restraint device used for large hoof stock, including wild Equids. It is constructed of a high strength tube steel mainframe with reinforced stress points. There are 4' wide catwalks on each side of the restraint for the handlers. It has 4 steel sliding doors and 4 smaller swing doors to provide easy access to restrained animals. The TAMER™ 4" thick high density foam pads with heavy-duty, rip-stop vinyl covers provide a secure and comfortable restraint. The hydraulic controls are mounted on the unit with adjustable pressure control and an easy to read pressure gauge allow for firm but gentle restraints.



FIGURE 1
The TAMER™



Horses moved from pasture to the sorting stall via a chute.

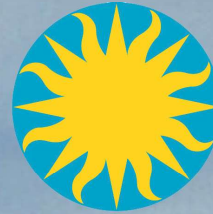


The horses proceed through gate A into the alleyway that contains an electronic scale. Horses are stopped on the scale for individual weighing with the use of manually operated sliding doors.



Horses view looking through an open TAMER™

ABSTRACT



Smithsonian National Zoological Park

Location: The National Zoo's Conservation and Research Center, Front Royal, VA

Species: Przewalski horses

Equipment: Hydraulic Equid TAMER™

Notes:

The facilities and Hydraulic TAMER™ at NZP-CRC has allowed investigators to develop a research program to help understand the fundamental reproductive biology of the Przewalski horses in a stress-free environment.

The ultimate goal is to develop an artificial insemination program for the genetic management of this endangered species. Specifically, the Hydraulic TAMER™ is used for the following procedures:

1. Female reproductive examinations - rectal palpation, ultrasonography, monitoring ovarian activity, pregnancy detection, hormone injections, and artificial insemination after inducing standing sedation.
2. Minor veterinary procedures - injection of anesthetics for artificial insemination, and treatments of cuts and abrasions.

Injections are given easily and safely.



Side view of TAMER™



Interior view of TAMER™

For project inquiries, contact Linwood Williamson, NZP-CRC, Front Royal, VA 22630



Saint Louis Zoo

Animals Always[®]

Location: Saint Louis Zoo Antelope Area

Species: Grevy's Zebra

Equipment: Hydraulic TAMER™ with built in scale and specially designed hydraulic head hugger for gentle but firm control of the neck and head. A 4' wide alleyway with a solid pass through push board suspended from a carriage that rides on an overhead rail system.

Notes:

Zoo staff are in the process of training the zebras to go through the TAMER™ on a daily basis. Their goal is to not only safely provide routine health care without general anesthesia or chemical immobilization, but also conduct veterinary, reproductive, nutritional and genetic research which will enhance the conservation of this endangered species.

Using a Hydraulic TAMER™, the zebras can be routinely and repeatedly handled, and data such as blood sample collections and ultrasound examinations can be carried out in a manner that is safe and low stress for both animal and handler.



Grevy's zebras walking through the Hydraulic TAMER™



Zebras being restrained in the Hydraulic TAMER™



Zebras being restrained in the Hydraulic TAMER™



GREVY'S ZEBRA TRUST

The Grevy's Zebra Trust (GZT) was established to conserve Grevy's zebra across its range in Kenya and Ethiopia. GZT addresses critical conservation issues facing Grevy's zebras and is focused on the following activities: employment of communities to protect and monitor the species, support education for pastoral children, awareness campaigns, partnering on research projects that link directly to management, rangeland rehabilitation through planned livestock grazing, and supporting the implementation of the Kenya Wildlife Service's Conservation and Management Strategy for Grevy's zebra in Kenya, 2007-2011. 21 AZA Zoos, several commercial AZA Members and numerous private individuals supported the activities of the GZT in 2008.

For more information, contact Martha Fischer at fischer@stlzoo.org OR visit www.grevyzebratrust.org

MARYLAND ZOO

Location: The Maryland Zoo, Baltimore

Species: 1.3 Plains Zebras

Equipment: Hydraulic TAMER™ with built-in scale.

Notes:

The Hydraulic TAMER™ was installed in the zebra barn in 2009. Using operant conditioning and other training techniques, several zebras had been conditioned to enter the TAMER™ in order to record weights and closely examine body conditions. The TAMER™ allows these tasks to be completed with less stress than anesthesia.

Future goals include desensitizing all of the zebras to the TAMER™ so hoof care, blood draws, and routine health exams can be performed on a regular basis without immobilizations.



Claire MacNamara target training a zebra in the TAMER™

For more information about the TAMERS™ at this location, contact Mark MacNamara at faunaresearch@gmail.com

Private Zoological Collection

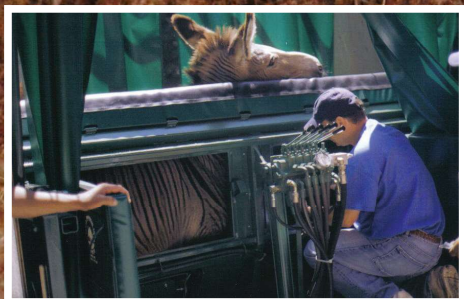
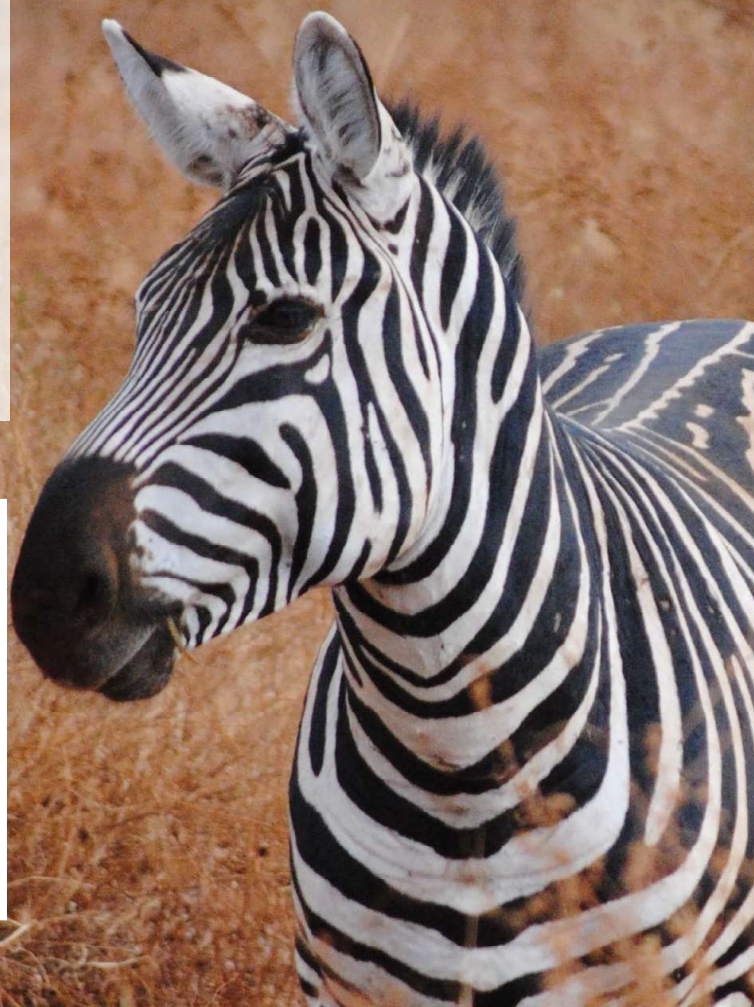
Location: Private zoological collection in Westchester County, New York

Species: Grant Zebras and Zeedonks

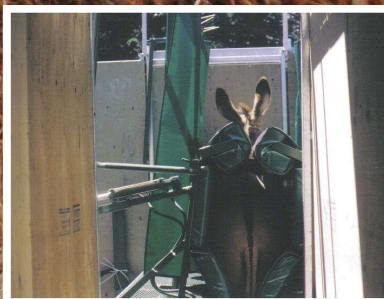
Equipment: Portable TAMER™ (H-TAMER™) and a portable 24' long alleyway with walk through push board mounted on an overhead track.

Notes:

Three adult female zeedonks (about the size of a large Grevy's zebra) and 2.2 Grants zebras were each restrained in the H-TAMER™ and were given vaccinations, health exams, and a hoof trimming if needed. The H-TAMER™ was set at 600 psi, and the animals were restrained and lifted until their feet just touched the ground. Their head and neck were held steady with the specially designed head hugger pads as shown in the photos.



Veterinarian working safely on zeedonk



Form fitting hugger pads



Hydraulic TAMER™ with push board alley

For more information about the TAMERS™ at this location, contact Mark MacNamara at faunaresearch@gmail.com



Location: Bronx Zoo, 50 Acre Wild Asia Exhibit
Species: Barasingha Deer, Axis Deer, and Blackbuck
Equipment: TAMER™ II and portable catch pens with sorting/push alleyways.

Notes:

A portable catch pen and TAMER™ II were set up in the night quarters for a mixed group of Axis Deer, Blackbuck, and Barasingha. A small group of Barasingha were caught in the catch pen and were then individually sorted and moved down a short alleyway into a TAMER™ II and restrained. Each deer received a routine health exam, hoof exam, and were scanned for ID tags, then immediately returned to the exhibit. *No chemical immobilizations were required.*

"Taking TAMERS™ to the animals." The portability & simple design allows the staff to set up the equipment in many of the off-exhibit areas that are spread out over the 250 acre zoo.



Portable corrals and TAMER™ II at Wild Asia Holding Pens

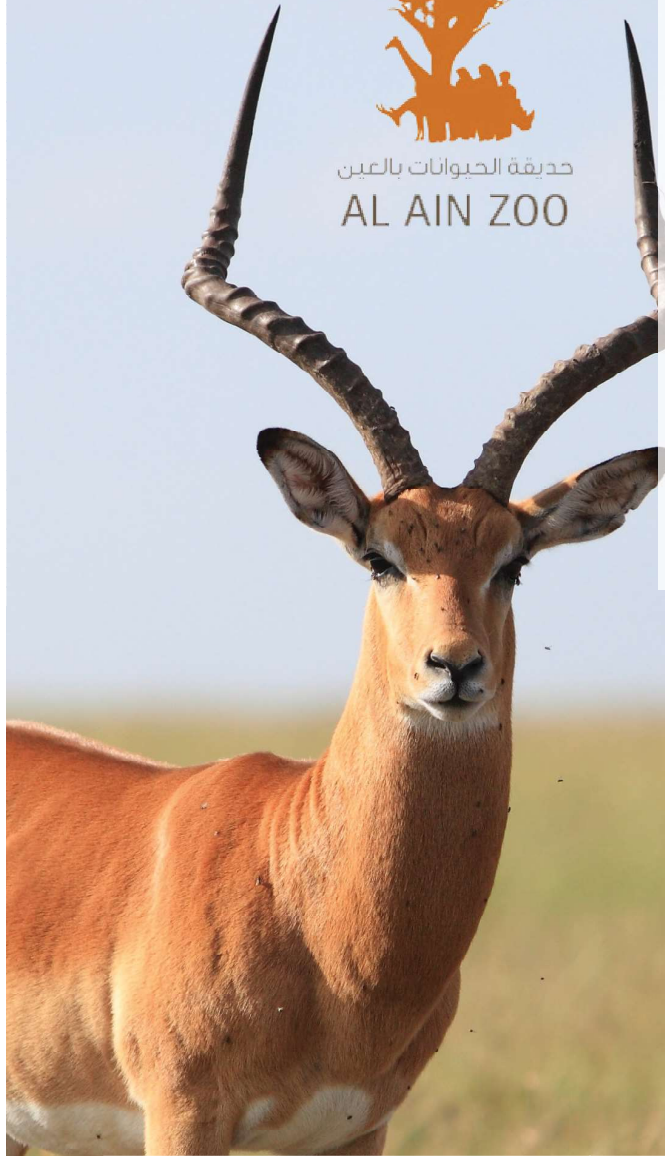


Barasingha in the TAMER™ II



Bronx Zoo TAMER™ II team

For more information about the TAMERS™ at this location, contact Mark MacNamara at faunaresearch@gmail.com



Location: Al Ain Wildlife Park and Resort, Al Ain UAE
Species: Antelope, Deer and Sheep
Equipment: Jr. TAMER™, TAMER™ II, several portable catch pens, and sorting stalls.

Notes:
 On February 14th during a visit to the Wildlife Park, I assisted the park staff in working a captive herd of 65 Beisa oryx through a TAMER™ II system. The animals were corralled and individually sorted and restrained in the TAMER™ II.

While the animals were restrained, they received vaccinations, ID tags, blood draws, and a routine health exam. Total time to work 65 animals was less than 4 hours. Justin Chuyen and Ricardo Pusey, the animal collection lead supervisors at the park, both agreed that the TAMER™ system enabled them to safely manage and monitor the health status of the large herd of deer and antelope.



Successful restraint



Sorting animals



TAMER™ Team

For more information about the TAMERS™ at this location, contact Mark MacNamara at faunaresearch@gmail.com