

PROCEDURE FOR HANDLING AND THE PLACEMENT OF CONFISCATED PANGOLINS

THE BASIC RULES WHEN HANDLING PANGOLINS

- **Biosecurity:** Confiscated pangolins may carry a variety of pathogens of infectious diseases from the natural environment or picked up from the process of hunting and transport. When handling pangolins or touching their feces, we need to use medical gloves and clean hands carefully in order to minimize the risk of spreading of infectious disease.
- **Handling the animals:** Pangolins are sensitive, easily stressed which could lead to them hurting themselves. Therefore, we should treat them with kindness: be very gentle and provide them noise-free environment in order to minimize stress-causing factors.
- **Intervening at the right time:** Pangolins are very strong; they are best left alone if they have clung to a tree or other objects. The best way to deal with this situation is to keep silent and wait till they make a move, and then continue.
- **Ensuring safety for the animals:** Pangolins should be kept in quiet dark enclosed space with no sharp edges, such as window grills. These should be covered with net or small mesh in order to prevent pangolins from escaping or hurting themselves.
- **Ensuring safety during the handling:** Touching them very lightly to make them curl, then pick the animal up by two hands. Do not place your hands on their belly or tail as you may get hurt by their scales as they curl up.

HANDLING CONFISCATED PANGOLINS

I. IDENTIFY PANGOLINS



Sunda Pangolin (Manis javanica).

Pangolins are the only mammal in the world covered in scales. They have a pointy-head and wet eyes. They are toothless. Instead, they use a long sticky tongue to catch their favorite food - ants and termites. They use their long prehensile tail for balance. Pangolins have large, curved claws used for digging and climbing. When pangolins are threatened, they curl up into a tight ball to protect themselves from predators, except human.

IDENTIFY FEATURES

Sunda pangolin (*Manis javanica*)

Small ears

Long tail has 24 – 28 rows of scales

Claws in forelimbs are 1.5 times longer than hind limbs

Distribution: In Vietnam: from Nghe An province to the south of Vietnam

In the world: Brunei, Cambodia, Laos, Malaysia, Indonesia, Myanmar, Singapore, Vietnam and Thailand.

Chinese pangolin (*Manis pentadactyla*)

Big ears

Short tail has less than 20 rows of scales

Claws in forelimbs are 2 – 4 times longer than hind limbs

Distribution: In Vietnam: north of Vietnam to Nghe An province

In the world: Bangladesh, India, Laos, Myanmar, Nepal, Taiwan, Thailand, Vietnam and China.

II. CLASSIFICATION AND SOLUTIONS

LIVE PANGOLINS

STEP 1. Emergency care on-site

Confiscated pangolins from illegal trade are usually dehydrated, undernourished or injured from hunting or transporting. In addition, many individuals have been made sick by injections and force-feeding to increase their weight. Therefore, steps below need to be followed as soon as possible at the scene of the confiscation:

- Move all pangolins to closed and safe rooms, make sure they are not able to escape or hurt themselves;
- Quickly but gently remove pangolins out the mesh bags, styrofoam box or other traps;
- Move pangolins into a suitably sized wooden box that allows air but can be closed until the next actions are decided;
- Provide water;
- Provide food: termites, ants and frozen ant eggs;
- Quickly assess their health by observation. Write reports of the injuries observed (location and condition) and their ability to move;

- Record the information of origin, transport process and diet (include type of food) of confiscated pangolins while it was being illegally traded;
- If the above steps cannot be done, contact a rescue center for advice and technical support.



Caring on-site for the confiscated pangolins by SVW's staff.

STEP 2. Request official confirmation and documentation of species identification, and complete procedures for handling pangolins

STEP 3. Solutions for live pangolins:

Option 1: Release pangolins back into the wild without quarantine, rescue and rehabilitation process.

Apply when live confiscated pangolins has an identified origin (i.e. being caught from the determined forest) AND has passed a health check by veterinarians, AND the required paperwork has been completed.

Suitable locations for release: (1) The original forests where the pangolins were hunted if that location is safe after the assessment. Or (2) An area near the home-forest with suitable environmental conditions.



The Pangolin released back into the wild by Save Vietnam's Wildlife, June 2015.

Option 2: Transfer pangolins to rescue centers: with (1) live pangolins that have a determined origin but are weak and injured. Or (2) live pangolins that have unknown origin, or its legal and placement options are not yet decided or (3) small (baby, infant, orphan) or pregnant pangolins.



Save Vietnam's Wildlife received confiscated pangolins at the scene.

DEAD PANGOLINS AND PRODUCTS MADE FROM THE ANIMAL

Step 1: Record data, store the images and complete confiscation documents.

Step 2: Ask for inspection from the competent authority.

Step 3: Preserve evidence (body, scales, body parts) until the competent authority makes a decision.

Step 4: Destroy the body and scales. The process should be witnessed by the stakeholders, after completing these following documents: Decision of confiscating and handling evidence, Minute the animals being destroyed.



PROCESS OF TRANSFERING PANGOLINS TO RESCUE CENTER

Responsibilities of Rescue Wildlife Centers are rescuing, rehabilitating and releasing wildlife back into nature according to regulations of the Vietnam's Law. The center should have function zones like quarantine, veterinary room and the long-term rescue enclosures.

PROCESS OF TRANSFER TO THE RESCUE CENTER

Contact rescue center for advice about process and paperwork for the transfer. The following documents should be prepared:

- Special transportation paper;
- Delivery animal record;
- The file of the case and information about confiscated animals;
- Completing the final papers of the confiscation and placement for evidence then hand the files to the rescue center.

Contact info

Save Vietnam's Wildlife

Address: Cuc Phuong Commune, Nho Quan District, Ninh Binh Province

Phone: 0303 848 222 or 0303 848 053

Hotline: 0978 331 441

Email: info@savevietnamswildlife.org

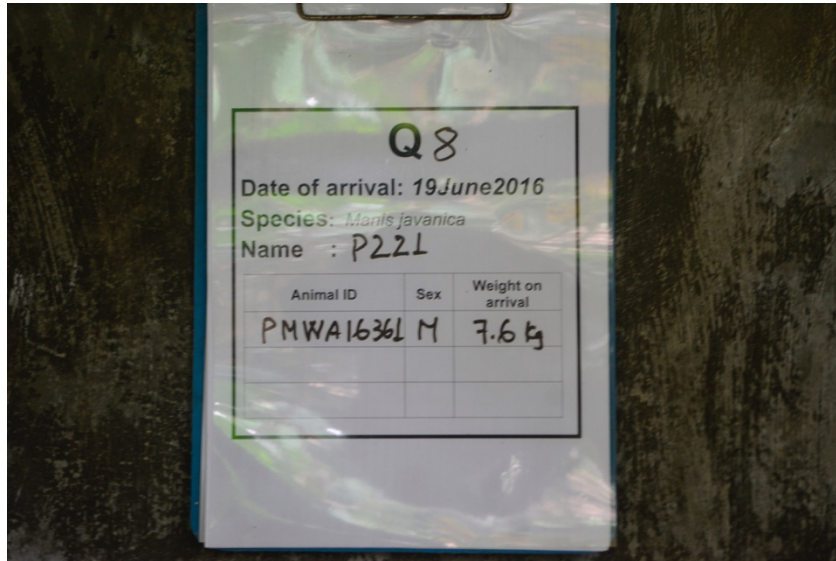
Website: savevietnamswildlife.org

Facebook: facebook.com/save.vietnams.wildlife

CARE PROCEDURES OF CONFISCATED PANGOLINS AT SAVE VIETNAM'S WILDLIFE

ACTIVITIES BEFORE PANGOLINS ARRIVE

- Disinfect the entire quarantine area;
- Check and clean all instruments and equipment used in quarantine;
- Prepare the food;
- Prepare animal profile, include below information:
 - Number of quarantine cage
 - Species
 - Date of arrival
 - Animal ID
 - Sex
 - Weight



Q8		
Date of arrival: 19 June 2016		
Species: <i>Manis javanica</i>		
Name : P221		
Animal ID	Sex	Weight on arrival
PMWA16361	M	7.6 kg

Examples of animal profile form in Save Vietnam's Wildlife.

ACTIVITIES ON ARRIVAL AT CENTER

- Health check: Pangolins arriving at rescue center should be health-checked as soon as possible. Based on the physical and psychological conditions, veterinarian will decide whether the animal should be checked immediately or whether to delay check until the animal is stable;



Health check for rescued pangolin.

- The wounds of the injured pangolins should be cleaned with iodine solution or other liquids, as well as provided antibiotics, sedatives, and analgesics.
- Sick pangolins need to be kept warm, provided with food and liquid infusion.
- Baby or orphan animals are normally hand-raised and fed with milk (imported milk for cats).

- Take a photo of all the animals and save the document in order to identify pangolins in the future;
- Create animal profiles for each of the pangolins with specific ID, and medical records if they need more veterinary care;



Pangolin in quarantine.

- Move the animals to quarantine:
 - Each pangolin is kept in a specific quarantine cage as they are solitary animals.
 - Do not separate mothers and babies. In cases where the baby has lost its mother and weighs under 800g, it should be kept with an adult female and monitor closely.
 - If there is not enough space (quarantine cage) for individual accommodation, more than one individual can be housed in a cage. However, make sure two males **never** share a quarantine enclosure. Animals put together should have the same condition of health and weight to prevent them from competing for food and shelter.
 - Provide food and water: use natural live ants, then slowly change the diet to frozen ants and mix food.



Collecting live ants from the forest.



Frozen ants mixed food for pangolins.

CARE PROCEDURES IN QUARANTINE

- Take feces samples of all animals to test for parasites and other diseases;
- Monitor health of the pangolins. Keep an eye on any bandages and clean the wounds for the injured ones;
- Weigh and record changes of pangolin weight;
- Clean the cages with water once a day and with sterilizing solution once a week;
- Animals should be fed daily;
- Ensure all of animals are completely healthy and not carrying diseases before moving out of the quarantine.



Changing a bandage for a pangolin that has a tail wound.

THE QUALITY OF QUARANTINE FOR PANGOLINS

- Dimensions: eight square meters, four meters long, two meters wide and three meters high;
- Arrange some trees and branches for the animals to climb;
- Moated large dishes containing live ants should prevent the ants from getting out;
- Floor made from brick or concrete in order to prevent pangolins from digging out;
- Roof designed sealed, half poured concrete or roofing tiles, the remaining half covering by mesh.



A quarantine enclosure at Save Vietnam's Wildlife.

SOME BASIC DRUGS TO USE FOR RESCUED PANGOLINS

- For the injured individuals: use iodine liquid to clean the wound, then cover it with a hydrocolloid product. Inject Amoxicillin/clavulanic acid at the rate of 8.75 mg / kg body weight, once a day, within 7-10 days.
- For the individuals that have problems with curling ability and suffer from diarrhea: Inject Lactated Ringers.
- For individuals that have worms in their feces: Inject Ivermectin 10 mg/ml (Ivomec® 1% Injection for Cattle and Swine, Merial) with rate 200-400µg / kg body weight.



Mobile veterinary care box.

Drug	Amount	Concentration	Calculator (ml)
Amoxicillin	8.5mg/kg		$(8.5 * \text{weight}) / \text{concentration}$
Lactated Ringers			
Sodium Chloride	50ml/kg	n/a	50* weight (double or fourfold if animals dehydrated)
Ivermectin	200-400µg/kg	10mg/ml	$(400\mu\text{g} * \text{weight}) / 10,000$

Table 1: Amount, concentration and calculation based on the weight of the animals.

RESULT OF RESCUE PROCESS

Situation of animal	Result of rescue process
Healthy pangolins, not carrying diseases	Release in their appropriate habitat; or transfer to long-term rescue enclosure until they can be released.
Sick or injured pangolins	Keep in quarantine until they recover
Mother pangolins that have baby under 02 kg weight, or pregnant pangolins	Transfer to long-term rescue area, look after then release them back into the wild.
Pangolins that are disabled that can't survive in the wild	Transfer to long-term enclosure or other research institutions.
Dead pangolins	Preserve for the research and education, or destroy.



Lucky – the pangolin at the long-term area of Save Vietnam's Wildlife.

RELEASE SITE SHOULD BE CHOSEN BASED ON THESE CRITERIA:

- The species used to live there but has declined in populations;
- Safety: far away from villages or established tracks, no potential threat of hunting;
- Abundant natural food (ants, termites) and water;
- There are many tree trunks, natural burrows, hollow tree stumps larger than 50 cm (in the case of releasing Sunda Pangolins).

PROCESS OF RELEASE

At least one week before release day

- List the animals to be released. Keep caring for small pangolins and those in poor health until they can be released;
- Perform health checks thoroughly with all animals;
- Prepare the document and release permission;
- Prepare animal transport boxes, mount water cup and note the animal ID for each box;
- All released individuals are microchipped or marked for future identification;
- Select the release site, ensure appropriate habitat as well as the number of biological populations. Drawing sketch/route in animal release at that area.



Veterinarians from the Wildlife Conservation Society support of the health checks pangolins before release.



Using camera traps to assess and select release site.

PREPARATION AND PROCESS OF TRANSPORT TO RELEASE SITE

Departure time should begin after sunset as pangolins are nocturnal animals. We usually move the pangolins out of the center at 10pm.

- Make sure the pangolins eat and drink in the center before being transferred into transport boxes;
- The transport boxes must be closed, must have vents and provided with water;



The transport boxes.

- Prepare food (frozen ant eggs) for pangolins during transport time;
- Mount tracking devices or microchip chosen individuals;



Inserting identification chips for pangolins before release.



Attaching radio transmitter for pangolins before release.

- Transport vehicles need to have air conditioning, and no music or loud noise during the journey to the release site;
- If you have a long journey, check the pangolins regularly and always provide them water. Feeding time is in the evening.



Checking pangolins and provide them food and water on the journey.

ACTIVITIES AT THE RELEASE SITE

- Feeding pangolins before release time, check for any injuries that may have occurred en route and let them settle down after their journey;



Checking the pangolins and giving them food and water before release

- Move the animal's box following pre-selected routes;
- Open the animal's box to let pangolins out;
- Each release location should be 500m apart from the others. A male should be released after a female and vice versa. Keep this process until all the animals are released.



A pangolin goes back home.

POST-RELEASE MONITORING BY RADIO TRACKING

ATTACHING RADIO TRANSMITTERS

- Uninstall magnet and record the frequency of the device.



- Drill two holes in the scales near the tail, then proceed to attach and flatten the surface of device to avoid it getting caught in branches when the animal moves.

From left to right: drill in the scale; best position for mounting transmitter; and another position for transmitter.

THE USAGE OF THE TRANSCEIVER DEVICE



- Hold for 3 seconds to turn off and turn on.
- Changing the parameters (frequency, volume; the ability to receive RF signals)
- Increase and decrease the volume and RF

The transceiver device

Turn on the device, enter the frequency of transceiver device using arrows and +/- button. Press E to store the frequency.



How to enter the frequency of the transceiver device.

From left to right: enter the frequency of transceiver devices (e.g. frequency channel 04: 151 053); volume (should up to 9 bars); The RF is lower as the transceiver device gets closer.

MONITORING AFTER RELEASE

Find the animal's shelter. Conduct twice a week for a month.

- Go to the release site that was recorded before;
- Turn on the device;
- Direct the antenna to where you have the strongest signal;
- Lower to the lowest possible RF that can be heard;
- Move about 50 meters in the direction of the strongest signal, and repeat until all signals from all directions are the same, with the lowest RF (0.5 - 1 bar);
- Remove the antenna and move to different directions within 20 meters to find the location with the strongest signal, until it can catch the signal with low RF (1-2 bar);
- Visual inspection to find the animal's sleeping shelter.

THE DATA TO BE RECORDED

- Date and time of the survey;
- Coordinates of the shelter;
- Mark or describe the animal's shelter (on the tree; in tree hollows; in hollow trees which were cut down, in underground caves).



Describe the animal's shelter (from left to right: on the tree; in tree hollows; in hollow trees Which were cut down, in underground caves)

SAVE VIETNAM'S WILDLIFE

Save Vietnam's Wildlife is a national Non-Profit Organisation in Vietnam that whose mission is to stop the extinction and champion the recovery of threatened species in Vietnam.

LEGAL FOUNDATION

Save Vietnam's Wildlife (SVW) was established under Decision No 482/QĐ-LHHVN, date of 22/07/2014 by Vietnam Union by Science and Technology Associations (VUSTA), and based in Cuc Phuong Commune, Nho Quan District, Ninh Binh Province.

SVW has been granted an activity license for science and technology No A-1200 dated August 1st 2014 by the Ministry of Science and Technology. The centre cooperate with the Vietnam Administration of Forestry and Cuc Phuong National Park in the rescue work, education and research of Vietnamese wildlife.

MAIN ACTIVITIES



*** The conservation program is a collaboration between Save Vietnam's Wildlife and Cuc Phuong National Park for the rescue, rehabilitation and reintroduction of wild animals into the wild.

The "Procedure for handling and the placement of confiscated pangolins" has been created and developed by Save Vietnam's Wildlife. Copyright by Save Vietnam's Wildlife and Cuc Phuong National Park. (V1. 2017)



WHEN YOU DETECT OR KNOW OF ANY CASE OF A PANGOLIN CONFISCATION OR A PANGOLIN NEEDING RESCUE PLEASE CONTACT:

SAVE VIETNAM'S WILDLIFE.

Address: Cuc Phuong Commune, Nho Quan District, Ninh Binh Province

Phone: 0303 848 222 / 0303 848 053. Hotline: 0978 331 441

Email: info@savevietnamswildlife.org

Facebook: <https://www.facebook.com/save.vietnams.wildlife>

Twitter: <https://twitter.com/WildlifeVietnam>

Instagram: <https://www.instagram.com/wildlifevietnam/>