

# Guidelines to Capture Escaped Nonhuman Primates

**SCOPE:** To provide guidance and recommendations for the safe capture of an escaped nonhuman primate.

## **I. GENERAL INFORMATION**

A. This document addresses the capture of an escaped nonhuman primate (NHP) within a DLAR animal facility. The general guidelines below are based on professional judgement and experience of DLAR veterinarians, animal behavior technicians, and investigators with the intent to minimize distress and potential injury to animals and personnel.

B. The procedures used to capture an escaped NHP depend on the individual animal and the training and experience of personnel involved with the capture. Ideally, an individual with NHP experience and familiarity with the behavior and personality of the escaped animal should be involved in the capture process.

C. Specific recommendations for the capture of all NHP species in all housing conditions and all areas of experimental use is beyond the scope of this document. Each laboratory should establish written procedures that address the capture of escaped NHPs relevant to the specific species and location or area where nonhuman primates are utilized outside of a DLAR animal facility. Laboratory personnel should be properly trained on the procedures and periodically review response expectations, such as in the form of a “table top” exercise or review. Each laboratory should have the appropriate capture equipment for their research activities readily available and accessible in the area where the NHPs are utilized. The equipment should be maintained in good repair.

D. Common safeguards and practices to minimize NHP escape include but are not limited to the following:

1. proper training of personnel including knowledge of any laboratory specific NHP capture procedures;
2. maintaining caging and equipment in good repair;
3. following established practices to perform procedures that involve cage changing, animal transfer, animal handling and restraint, animal training and animal transportation;
4. ensuring that doors and openings to primary (cage or pen) and secondary (room) enclosures are closed and properly secured; and
5. the appropriate use of chemical restraint (sedation) to handle NHPs whenever possible.

E. If a NHP becomes loose,

1. remain calm and avoid sudden movements that may startle the animal;

2. secure the area to contain the animal;
3. get assistance for the capture process;
4. post a sign on the entrance to the room to warn personnel of the escaped animal; and
5. notify the DLAR veterinary staff.

F. Capture methods involve passive, physical, or immobilization procedures and are influenced by the individual animal and specific situation.

1. **Passive capture.** An escaped NHP will usually return to its home cage within a reasonable time period when given the opportunity and with positive reinforcement. Passive capture minimizes distress and the potential for injury to the animal and personnel. Passive capture should be attempted before utilizing other capture methods unless the escaped animal is aggressively threatening personnel attempting to enter the room or is likely to harm other animals in the room.

2. **Physical capture.** Physical capture methods include the use of pole and collar techniques, capture nets, and NHP bite and scratch resistant gloves. If passive capture is unsuccessful, the following physical capture methods may be utilized.

a. Capture poles may be used to capture a NHP already fitted with a neck collar and trained to the pole and collar method of restraint. Capture poles come in different lengths. Capture poles of sufficient length that prevent the escaped NHP from grabbing the handler should be used in capture procedures.

b. Capture nets may be used to direct and guide the NHP to voluntarily return to its home cage. A capture net can also be used to catch, secure, and return the animal to its home cage. The appropriate sized capture net should be used based on the species and size of the NHP. NHP bite and scratch resistant gloves should always be worn when using a capture net.

c. NHP bite and scratch resistant gloves are available in various lengths and made of different materials. NHP bite and scratch resistant gloves may decrease the severity of an injury from a NHP bite but will not prevent trauma or other damage. "Crushing," and other injuries, to the hand and forearm can occur from a NHP bite despite wearing NHP bite and scratch resistant gloves. Gloves alone may be appropriate for the capture of squirrel monkeys, marmosets, and other New World species but should not be used as the sole method of capture for macaques, baboons, African greens, and other Old World species.

3. **Chemical immobilization.** NHPs may be chemically immobilized with an injectable anesthetic (e.g., ketamine). This should only be attempted on an escaped NHP by a DLAR

veterinarian, veterinary technician, or other personnel experienced with administering injectable anesthetics in NHPs. Chemical immobilization is accomplished either by using a capture net to first secure the animal or by using a syringe pole.

- a. Catch the NHP in a capture net. Twist the pole attached to the net to twist the net closed and prevent the animal from escaping. Place the net with the captured animal on the room floor to allow a second individual to administer the ketamine through the net and into the animal.
  - b. Use a syringe pole or other mechanical device to inject the anesthetic into the animal. The sedated animal is then returned to its home cage.
- G. Capture procedures should be performed by two individuals for practical and safety reasons.

## **II. PRE-CAPTURE PROCEDURES**

- A. Exit the room and close the room door.
- B. Post a sign on the exterior of the room door to notify personnel of the escaped animal and inform them to not enter the room.
- C. Contact the DLAR facility veterinarian (preferred), veterinary technician, or animal behavior technician. These individuals can lead or assist with the animal's capture.
- D. Do not attempt to capture the animal without another individual being present.

## **III. CAPTURE GUIDELINES WITHIN THE ANIMAL HOLDING ROOM**

- A. Passive capture should be attempted first.
  1. Place enrichment food items (e.g., fruits, vegetables, etc.) on the floor in the back of the vacated cage to motivate the animal to return to its cage.
  2. Leave the cage door wide open.
  3. Exit the room and close the room door.
  4. Periodically observe the escaped animal through the room door widow or viewing port. When the animal returns to its cage, carefully enter the room and quietly move toward the cage. Close the cage door and secure the door with the appropriate locks.
    - a. If the animal leaves the cage before the cage door is secured, repeat #1 – 4.
  5. Provide the animal a reasonable period of time to voluntarily return to its cage. The amount of time provided depends on the specific situation, the observed behavior of the escaped animal, and professional judgement. One to two hours is typically sufficient.

B. If the escaped animal does not voluntarily return to its cage, attempt the appropriate physical capture method. Two individuals enter the room and coordinate the capture of the escaped animal using one of the following methods.

1. If the animal is wearing a fitted neck collar, personnel trained with using pole and collar capture and restraint procedures may attempt to capture the animal using long capture poles. Short capture poles should not be utilized.
2. Capture nets. The pole of the net is held with two hands. The net is positioned between the holder and the escaped animal and can be used in one of the following manners.
  - a. The net is used to direct and guide the NHP to voluntarily return to its home cage. The cage door is closed and locked.
  - b. The net may alternatively be used to capture the NHP. If the NHP is captured in the net, twist the pole to subsequently twist the net closed and prevent the animal from escaping the net. The DLAR veterinary staff can administer ketamine through the net to immobilize the animal then return it to its home cage.

C. If physical capture is repeatedly unsuccessful, chemical immobilization may be attempted. Chemical immobilization is rarely necessary and should only be performed by a DLAR veterinarian, veterinary technician, or other personnel experienced with administering injectable anesthetics in NHPs.

#### **IV. CAPTURE GUIDELINES WITHIN THE ANIMAL FACILITY PROCEDURE ROOM**

A. The same process, procedures, and order are followed as listed under Section III if an unoccupied NHP cage is present in the procedure room.

B. If a NHP cage is not present in the procedure room

1. Exit the procedure room and close the door.
2. Inform DLAR personnel of the escaped animal and ask him/her to retrieve an empty NHP cage with enrichment food items placed on the floor towards the back of the cage. NOTE: NHP cages may be too large to fit through some procedure room doors. In this case, use a NHP transfer cage if one is available or consider physical capture or chemical restraint.
3. Place the empty cage inside the procedure room distant from the room door. Open the cage door, exit the room, and close the door.
4. Follow the same process, procedures, and order as listed under Section III.

#### **V. CAPTURE GUIDELINES FOR OTHER AREAS**

- A. Follow the established laboratory procedures for capturing an escaped NHP.
- B. If laboratory procedures are not established or not known
  - 1. Secure the area to contain the escaped animal and remove non-essential personnel.
  - 2. Post a sign on the exterior of the room door to notify individuals of the escaped animal and inform them to not enter the room.
  - 3. Call the DLAR facility veterinarian to report the escaped NHP and obtain assistance with the capture. Call the DLAR behavior technician or veterinary technician if the veterinarian cannot be reached. DLAR contact information is available under the Contact tab on the DLAR website (<https://web.dlar.pitt.edu>).

## **VI. POST-CAPTURE PROCEDURES**

- A. Report any personnel injury or exposure to NHP tissues or body fluids in accordance with DLAR SOP #205 (*Personnel Injury or Exposure From NHPs*).
- B. Make sure all locks on every NHP cage in the room are secure.
- C. Observe all animals in the room for injury. The escaped animal may have been injured while outside of the cage or inflicted injuries on other animals housed in the room. Report any animal health or welfare concerns to the DLAR veterinary staff.
- D. Evaluate the room and equipment for damage and report concerns to the DLAR facility supervisor.
- E. Remove the “Escaped NHP” sign from the exterior of the room door.
- F. Inform the DLAR veterinarian and supervisor that the escaped animal has been captured.

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## Appendix 1 – Summary of NHP Capture Procedures

### Pre-Capture Procedures

1. Exit the room and close the room door.
2. Post a sign on the exterior of the room door to notify personnel of the escaped animal.
3. Contact the DLAR facility veterinarian (preferred), veterinary technician, or animal behavior technician. These individuals can lead or assist with the animal's capture.
4. Do not attempt to capture the animal without another individual being present.

### Passive Capture Procedure (attempt this first)

1. Place enrichment food items (e.g., fruits, vegetables, etc.) on the floor in the back of the vacated cage to motivate the animal to return to its cage.
2. Leave the cage door wide open.
3. Exit the room and close the room door.
4. Observe the escaped animal through the room door widow or viewing port. When the animal returns to its cage, carefully enter the room and quietly move toward the cage. Close the cage door and secure the door with the appropriate locks. If the animal leaves the cage before the door is secured, repeat #1 – 4.
5. Provide the animal a reasonable period of time to voluntarily return to its cage. One to two hours is typically sufficient.

### Physical Capture Procedure (attempt if passive capture is unsuccessful)

1. If the animal is wearing a fitted neck collar, personnel trained with using pole and collar capture and restraint procedures may attempt to capture the animal using capture poles of sufficient length that prevent the escaped NHP from grabbing the handler.
2. Capture nets. The pole of the net is held with two hands. The net is positioned between the holder and the escaped animal and used in one of the following manners.
  - a. The net is used to direct and guide the NHP to voluntarily return to its home cage. The cage door is closed and locked.
  - b. The net may alternatively be used to capture the NHP. If the NHP is captured in the net, twist the pole to subsequently twist the net closed and prevent the animal from escaping the net. The DLAR veterinary staff can administer ketamine through the net to immobilize the animal then return it to its home cage.

### Chemical Capture Procedure (attempt if passive and physical capture are unsuccessful)

1. Chemical immobilization is rarely necessary and should only be performed by a DLAR veterinarian, veterinary technician, or personnel experienced with administering injectable anesthetics in NHPs.

### Post-Capture Procedures

1. Report any personnel injury or exposure to NHP tissues or body fluids in accordance with DLAR SOP #205 (*Personnel Injury or Exposure From NHPs*).
2. Make sure all locks on every NHP cage in the room are secure.
3. Observe all animals in the room for injury. The escaped animal may have been injured while outside of the cage or inflicted injuries on other animals housed in the room. Report any animal health or welfare concerns to the DLAR veterinary staff.
4. Evaluate the room and equipment for damage and report concerns to the DLAR facility supervisor.
5. Remove the “Escaped NHP” sign from the exterior of the room door.
6. Inform the DLAR veterinarian and supervisor that the escaped animal has been captured.

# Do Not Enter!

## Loose NHP in Room

