Procedures for Nonhuman Primate Socialization

Last Updated 1 May 2014

1. Purpose
   To describe the procedures for social housing of non-human primates at the University of Michigan.

2. Responsibility
   a. Veterinary Personnel
   b. Husbandry Personnel
   c. Training Core Personnel
   d. Investigative Personnel

3. Definitions
   a. **Introduction**: The initial observation and attempt to pair house two nonhuman primates.
   b. **Reintroduction**: Re-pairing two nonhuman primates who had previously been housed together but were separated for various reasons (study purposes, medical issues, etc.).
   c. **Individually Housed**: Describes primates housed without tactile contact to another primate. Still has visual and olfactory contact with other primates.
   d. **Panel Housed**: Describes primates housed such that tactile contact is possible with another primate. This can be achieved via a panel with holes, mesh, grooming bars or other divider to limit access.
   e. **Pair Housed**: Describes primates housed such that two animals share the same cage space with full access to one another.
   f. **Stable Pair**: A pair of non-human primates that are considered compatible with no known aggressiveness, human interventions or separations.

4. Procedures
   a. Training
      i. Any personnel performing non-human primate introductions will be trained by a member of the Training Core or Veterinary Staff prior to pairing any animals.
   b. Creating new pairs
      i. When two animals are observed that may make a good social pair (See “Guidelines for Identifying Social Partners”), notify the social housing veterinarian and social housing technicians (may include approved husbandry personnel or veterinary technicians) who will coordinate the process with the principal investigator, laboratory contact/manager, area veterinarian and husbandry staff to ensure approval, caging and equipment needs.
         1. In general, good social pairs will have clearly different social rankings in order to form a stable pair.
         2. Animals with rankings that are too similar (equivocal) should not be paired.
      ii. Once approval is obtained, the social housing veterinarian or social housing technicians record the pair in the “Pair Housing Log” (located on CTools). Complete all information.
      iii. Documentation needs to be kept on all observations. Notes should be stored in the social housing binder located with the area veterinary technician.
   iv. Introductions should begin (Day 1) on Monday, Tuesday or Wednesday morning.
      1. Ensure animals have eaten prior to an introduction.
      2. No new introductions should begin Thursday-Sunday unless approved by the veterinarian.
      3. No new introductions should begin on a day the room is scheduled for cage change or one of the partners is scheduled for anesthesia.
   v. All introductions will be made in a stepwise fashion progressing from visual contact, to limited physical contact to full contact (where possible).
      1. Serious negative interactions between potential partners will result in cessation of the introduction.
   vi. Introduction procedures: **Note: Inform the veterinarian via email or phone of progress at every step.**
      1. Prior to or during initial introductions if animals are more focused on the observer than each other:
         a. Relax body posture to minimize the ‘human threat’ and blend with the environment as much as possible.
         b. Use a hand mirror to observe the animals while facing away from the cage at a reasonable distance.
         c. Consider the use of technology such as a camera to remove the distraction of a human observer entirely.
      2. Place the panel (fine mesh, mesh or grooming bar panels) between two animals in a cage for 30 minutes up to 24 hours. Time will vary depending on the animals.
         a. Less than 30 minutes may allow insufficient time for acclimation to the observer, resulting in an
incorrect assessment.

b. Longer than 24 hours may result in frustration or injury.

3. Monitoring times will vary, depending on the nature of the pair. For example, primates that have been singly housed for extended periods of time may require longer monitoring.

4. Depending on past social housing experiences, primates may have abnormal behaviors resulting in longer periods of time at each step.

5. Step 1: Place a clear modified/fine mesh combination divider to allow finger contact between potential partners for compatibility assessment. Animals should always have access to an opaque panel for privacy.
   a. Monitor for 30-60 minutes at initial placement of the panel, then every 30-60 minutes thereafter until an assessment of the subordinate-dominant relationship can be made. (See “Behaviors to Look for in Pairs” and “Communication by Postures and Facial Expressions”).

6. Step 2: Once the subordinate-dominant relationship has been established (later in Day 1 or early Day 2), change the clear modified/mesh dividers for a mesh divider only, to allow for arm grooming/contact.
   a. Monitor for 30-60 minutes at initial placement of the panel, then every 15-30 minutes for the first 1-2 hours, then every hour.

7. Step 3: If the introduction is progressing smoothly, change the mesh divider for a grooming bar or modified clear divider, to allow full body grooming/contact.
   a. Monitor for 30-60 minutes at initial placement of the panel, then every 15-30 minutes for the first 1-2 hours, then every hour.

8. Step 4: If the animals are showing signs of positive interaction, slide the social panel open to allow for full social access between the animals (alternatively, animals with modified clear panels may be changed to grooming bars).
   a. Monitor for 60 minutes at initial access, then frequently through out the remainder of that day and the next.
   b. Animals should be monitored carefully the following week, for a minimum of 30 minutes per day, total (preferably broken into two blocks of at least 5 minutes).
   c. Once pairs are stable, animals should be observed for 5-10 minutes, 1-3 times per week.
   d. Pairs may have limited full contact such as separation at feeding times.

   Appropriate personnel will be informed of these procedures by the pairing technicians.

vii. Halting an Introduction

1. Spray bottles with water must be supplied in rooms in which introductions are being conducted.
2. During an introduction, if at any time animals become aggressive and require intervention, spray the animals with water, and separate the animals.
3. If animals do not show signs of compatibility during any of the above steps, the pairing should not proceed.
   a. The person doing the observations should contact the social housing veterinarian or social housing technician if a pair is thought to be incompatible so the decision to halt the introduction can be made.

c. Separation of Pairs
   i. If pairs need to be separated for research or medical reasons, the social housing veterinarian or social housing technician will record the event in the Pair Housing Log.

d. Reintroduction of Pairs
   i. Confirm that the primates to be reunited are the correct individuals by matching the animals’ tattoo numbers with those on their records.
   ii. Observe pairs through a fine mesh panel to ensure pair compatibility has not been compromised over the separation period.
   iii. Slide the social panel open.
       1. Monitor pair as necessary to ensure pair compatibility has not been compromised over the separation period.
   iv. Record all observations in the social housing binder and record the reintroduction in the Pair Housing Log.

   e. Maintenance of Established Pairs
      i. Husbandry personnel and/or Investigative personnel will monitor any established pairs.
      ii. Monitor each established pair 1-3 times per week for 5-10 minutes to ensure compatibility.
      iii. Contact the veterinary technician if there is a concern about compatibility.
      iv. Record observations on the Non-human Primate Pair Housing Maintenance Log.

5. Related Documents

   unable to find any of the related documents in Xythos at this time
   a. Pair Housing Log
   b. Guidelines for Identifying Social Partners
   c. Behaviors to Look for in Pairs
   d. Communication by Postures and Facial Expressions
   e. Non-human Primate Pair Housing Maintenance Log