

STANDARD OPERATING PROCEDURES
DIVISION OF COMPARATIVE MEDICINE
UNIVERSITY OF SOUTH FLORIDA

SOP#: 501.6

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TITLE:	Wildlife-derived Avian Husbandry and Health Surveillance
SCOPE:	Animal Care Personnel
RESPONSIBILITY:	Facility Manager, Technical Staff, Veterinary Staff
PURPOSE:	To Outline the Proper Procedures for Receiving, Physical Examination, Evaluating Health Status, Health Surveillance, Handling, Care, and Husbandry Practices Related to Wildlife-derived Avian Species

I. PURPOSE

1. To ensure the highest quality of animal health and preclude the development of spontaneous diseases or disorders, which could compromise the integrity of studies and the interpretation of results
2. To ensure personnel handling wild-caught avian species perform their duties in a manner that complies with all current governing laws, regulations, and guidelines
3. To reduce the risk of exposure of research and animal care staff, and of intramural bird colonies to unidentified infectious agents that may be present in wild birds derived from natural settings

II. RESPONSIBILITY

1. The Veterinarians oversee all aspects of animal health and are assisted by all program staff.
2. Principal Investigators and Comparative Medicine personnel are responsible for the husbandry, care, and oversight of all wildlife-derived avian species unless an exception is approved by the Director or Associate Director of Comparative Medicine.
3. Facility Managers ensure implementation of all procedures, that appropriate personnel protective equipment is available, and that animal housing rooms are clearly label as "Containment" and specific safety practices implemented.

III. PROCEDURES

1. Receipt

- a. To ensure sufficient containment housing is available, and appropriate caging, supplies, and equipment are prepared and available in advance of the arrival of wild birds derived from natural settings, the PI or delegated research personnel must inform Comparative Medicine management in advance of all anticipated wild bird capture date(s) and the subsequent dates of wild bird arrival to containment housing rooms within Comparative Medicine managed animal facilities.
- b. Individual cage tags are prepared for each cage and should include the following information:

1. Name of Investigator
 2. IACUC Protocol #
 3. Species
 4. Sex
 5. DOB (age on arrival if unavailable)
 6. Body Weight
 7. Arrival Date
 8. Source
 9. Prior procedures or conditioning performed
- c. All staff will be immediately notified of newly captured birds brought into the facility.
- d. New animals are recorded on the ***Per Diem Sheet*** and ***Progress Notes*** located in the ***Room Log Book***.

2. Handling and Restraint

- a. Birds may be handled by hand only after consult with PI and/or veterinarian.
- b. Restraint
 1. Small birds - can be restrained with one hand placed over the bird's back and placing the head between the second and third finger.
 2. Medium-sized birds - position the bird so it is facing a corner/rear of enclosure; drape towel over the back; grasp the back of head with thumb and forefinger on either side of the mandibles; the palm is gently cupped around the bird's back and the towel wrapped around front. The body/feet are supported by the second hand and the bird may be positioned on its back to facilitate manipulations.
 3. Large birds - Place a towel over the back and wrap the animal as it is lifted up; the head is secured behind by placing the thumb and forefinger on either side of the mandibles; the body supported by the second hand/forearm or on a counter surface. .
 4. Covering the head/eyes can calm the bird while being restrained. Be careful not to cover the nares.
 5. Care must be taken not to restrict movement in the chest or abdominal area of any bird while restraining, as they do not have diaphragms and cannot move air in or out of their air sacs if restrained incorrectly.

3. Housing

- a. Due to the diversity of avian species that may be derived from natural settings and housed in animal facilities, specific environmental conditions of primary enclosures that are essential to the aims of the research and welfare of the wild birds housed should be detailed in the IACUC approved protocol.
- b. To reduce stress, time spent in housing rooms of wild-caught birds should be kept to a minimum. Before entering the room, assemble all supplies necessary to complete the task. Ensure all cage doors (for food cups) are closed completely.
- c. Husbandry and care of wildlife is completed after husbandry and care of all other animals.
- d. Appropriate PPE is to be worn in accordance with SOP # 905. When entering a containment room, gloves, lab coat, hair bonnet, shoe covers, face shield and mask are required; a N95 face mask is recommended.
- e. Animal use outside of the housing room (e.g., substance administrations, and tissue derivations) should be conducted within a Biological Safety Cabinet.
- f. Work surfaces and non-disposable equipment are cleaned and decontaminated with Oxivir Tb after each use.

4. Feeding and Watering

- a. Avian species are fed ad libitum unless alternative methods are described in the IACUC approved protocol.
 1. Feed containers are sent to the cagewash at least weekly for sanitation. Changing of the containers is recorded on the **Room Status Sheet**.
- b. **Watering**
 1. Water will be given *ad libitum*.
 2. Water containers will be checked daily and refilled as needed to ensure adequate supply is available. Water containers will be dumped completely prior to refilling and returned to the same cage from which they were removed.
 3. Water containers are sent to the cage wash at least weekly for sanitation. Changing of the containers is recorded on the **Room Status Sheet**.
- c. **Supplements**
 1. PI is responsible for providing any supplements (e.g., grit and vitamins) as needed.

5. Health Surveillance

- a. On arrival allow birds to acclimate to their surroundings for a minimum of 48hr. During this time, collect pooled fecal samples from cage liners and place in microcentrifuge tube to be sent to Zoologix for PCR analysis for the following zoonotic agents: *Mycobacterium avium*, *Chlamydophila felis/Chlamydophila psittaci*, *Salmonella*, *Entamoeba histolytica*, *Entamoeba dispar* and *Entamoeba moshkovskii*. The housing room is considered containment and should be handled last within the facility.
- b. Each housing room is assigned to an Animal Care Technician. Daily observations of the Animal Care Technician are recorded on the **Room Status Sheet** within the **Room Log Book**.
- c. Surveillance frequency:
 1. Health surveillance will occur once per day between the hours of 7:30 AM and 3:30 PM.
- d. Observations and communications must be noted on the **Room Status Sheet** and the Facility Manager's **Animal Health and Environmental Concern Form**.
- e. Performance of daily observations and general health surveillance
 1. Each animal/cage is observed to evaluate:
 - a. Food and water intake
 - b. Fecal output
 - c. Assurance of water supply and patency
 - d. Other (e.g., green feces, ruffled feathers, lethargy, eye(s) closed, excessive molting)
- f. Refer to **SOP #006** entitled, **Animal Health and Environmental Surveillance** for specific procedures of reporting and recording health concerns.

NOTE: If at any time there is a medical emergency, the PI and clinical veterinarian are to be notified immediately.

6. Cage Changing

- a. Cage changes are performed by the PI/research staff unless the animal care staff is requested to do so.
- b. Pan liners for each cage are changed as needed but at least two-three times a week. Pans are changed at the time of cage changing as needed or at the completion of experiments. Pan and cage changing will be noted on the **Room Status Sheet**.

- c. Racks and cages are changed out every other week, unless excessive soiling occurs. In such cases, staff will contact PI, who will move birds to new cages to free up soiled caging for cleaning. Rack and cage changes will be noted on the **Room Status Sheet**. Animal will maintain its relative position on the new rack.
- d. Only one animal and its cage card will be moved at one time.
- e. Cages will be moved to the new rack so that they retain the exact same cage position as they held on the original rack. When the rack is put back into place, the relative positions of all cages must not have changed.

7. Room Duties

- a. Upon completion of cage changing, feed and watering, and daily health surveillance, the following tasks are to be performed. Room duties described below are minimal requirements; additional duties and frequencies are at the Facility Manager's discretion.
 1. Complete **Room Status Sheet** by recording:
 - a. Minimum and maximum room temperature and humidity (measurements out of the acceptable range are described under the **Health and Environmental Concern** column of the **Room Status sheet** and reported to the Facility Manager via the **Health and Environmental Concern Form**).
 - b. Feed and water available
 - c. Caging and equipment changes performed
 - d. Housekeeping duties performed
 - e. Significant health or environmental concerns
 - f. Time of observation and the initials of technician
 2. Assure no investigator's supplies or trash are left in the room.
 3. Check and replenish supplies (e.g., soap, paper towels) as needed.
 4. Wipe down counter/sink areas with Sporidicin.
 5. Assure any new arrivals are recorded on appropriate **Per Diem Sheets**.
 6. Record any additions or subtractions made by room technician or research staff as observed.
- b. **Bi-weekly room duties** include:
 1. Sweep floor and mop with Oxivir Tb.
- c. **Weekly room duties** include:
 1. Sanitize mop head.
 2. Wipe down door and doorframe with Oxivir Tb.
 3. Physically count animals within the room.
- d. **Semi-monthly room duties** include:
 1. Sanitize all room cleaning equipment (mop, broom, mop bucket, dust pan, etc.).
- e. **Monthly room duties** include:
 1. Clean HVAC vents, and replace air filters as needed.
 2. Confirm diurnal light timers are accurately controlling animal room lights (HOBOT), and record. Light Timers are monitored by the PI and should not be adjusted without permission. Contact PI if a problem occurs.
 3. Wash walls with Oxivir Tb quarterly or when each cohort is removed from the housing room.

Approved:

Date: