

**STANDARD OPERATING PROCEDURES**  
**DIVISION OF COMPARATIVE MEDICINE**  
**UNIVERSITY OF SOUTH FLORIDA**

SOP#: 500.6

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<b>TITLE:</b>	<b>Avian Husbandry</b>
<b>SCOPE:</b>	Animal Care Personnel
<b>RESPONSIBILITY:</b>	Facility Manager, Technical Staff, Veterinary Staff
<b>PURPOSE:</b>	To Outline the Proper Procedures for Receiving, Physical Examination, Evaluating Health Status, Handling, Care and Husbandry Practices Related to Avians

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**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 avians perform their duties in a manner that complies with all current governing laws, regulations and guidelines.

**II. RESPONSIBILITY**

1. The Veterinarians oversee all aspects of animal health, and are assisted by all program staff.
2. Facility Managers ensure implementation of all procedures.

**III. PROCEDURES**

**1. Receipt**

- a. Individual cage cards are prepared for each cage and include the following information:
  1. Investigator
  2. IACUC #
  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
- b. Shipping containers are inspected for signs of damage and shipment accuracy.
- c. Technician will notify the Facility Manager regarding any damage to shipping containers or contents.
- d. Facility Manager will notify the Program Assistant of damaged or rejected shipments, or orders improperly filled (i.e., weight, age, number requested).

- e. The Clinical Veterinarian will be immediately notified of health concerns or deaths occurring in transit.
- f. New animals are recorded on the **Per Diem Sheet** and **Progress Notes** located in the **Room Log Book**. Notation in the **Progress Notes** will include the vendor source and a statement reflecting general appearance on arrival.

## 2. Handling and Restraint

- a. Birds may be handled by hand, with gloves, or toweled to facilitate manipulations.
- b. Restraint
  - 1. Finches/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. Pigeons/medium 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.
  - 3. Chickens/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.  
**Note** – do not restrain chickens in dorsal recumbency as it inhibits breathing.
- c. When approaching a bird, move hands slowly over the back of the animal. Just prior to making contact, drop hands to hold wings down on the body. Restrain legs between fingers.
- d. Covering the head/eyes can calm the bird while being restrained. Be careful not to cover the nares.
- e. 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. Avian species are housed at a maximum density described in section III.7-8 or as described in an approved IACUC protocol.
- b. Social species are housed socially unless they exhibit incompatibility or single housing is described in the approved IACUC protocol.
- c. Avian species can exhibit dominance/aggressive behavior when group housed. If injuries are observed, the aggressor(s) should be isolated, and if necessary environmental changes made.
  - 1. Decrease housing density
  - 2. Reduce light
  - 3. Lower the temperature
  - 4. Introduce toys/bright colored objects
- d. Young birds may require additional environmental heat. A heat lamp is used to maintain a cage temperature of 80-82<sup>o</sup> F for chicks.
- e. Any environmental changes made must be communicated to and approved by the researcher prior to implementation.
- f. Appropriate PPE should be worn in accordance with **SOP #905**. When changing cages, gloves are required and a mask or N95 respirator is recommended.

#### 4. Feeding and Watering

- a. Refer to **SOP #022** entitled, **Feed and Bedding** for a list of approved diets. ***NOTE: procedures below are not for animals on special diets or water.*** Special diets must be described in an approved IACUC protocol (e.g., type, amount, and form).
- b. Feeding
  1. All avians are fed ad libitum unless otherwise specified by protocol.
  2. Feed cups/containers are dumped and refilled daily.
  3. Feed containers are sent to the cagewash at least weekly for sanitation. Changing of the containers is recorded on the **Room Status Sheet**.
- c. 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 it was 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**.

#### 5. Health Surveillance

- a. 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**.
- b. Surveillance frequency:
  1. Health surveillance will occur twice per day on weekdays. The initial health surveillance will occur prior to 9:30 AM, and again about mid afternoon.
  2. Health surveillance on weekends and holidays will occur once per day.
- c. Observations and communications must be noted on the **Room Status Sheet** and the Facility Manager's **Animal Health and Environmental Concern Form**.
- d. 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. General appearance (presence of lesions/injuries, coat condition, disposition)
- e. 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 clinical veterinarian is to be notified immediately.**

## 6. Cage Changing

- a. Pans and liners are changed on Monday, Wednesday, and Friday in the animal room. Pan liners will be changed daily when excessively soiled and for brooder caging. Pan changing will be noted on the **Room Status Sheet**.
- b. Cages are changed weekly for pigeons and chicks, every two weeks for finches. Racks are changed weekly. Rack and cage changes will be noted on the **Room Status Sheet**. Animal will maintain its relative position on the new rack.
- c. Only one animal and its cage card will be moved at one time.
- d. Any caging excessively soiled will be changed as necessary to maintain an acceptable level of sanitation.
- 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. Brooder Procedures

- a. Capacity: 20 chicks, less than 3 weeks of age. Chicks over 3 weeks require alternate housing.
- b. Maintain temperature at 95°F for chicks.
- c. Adjust gates to feed and water troughs to the size of birds (large enough to allow access to feed and water, yet small enough to prevent escape). Gates should be checked and adjusted at least weekly.
- d. Water trough is filled daily and as often as necessary to keep trough full. Water trough is removed and cleaned twice weekly.
- e. Feed trough is filled daily and as often as necessary to keep trough full. Feed trough is removed and cleaned weekly.
- f. Brooder liner is changed daily.
- g. Brooder is thoroughly hand washed weekly with warm soapy water. Brooder and brooder components are not compatible with cage wash equipment.
- h. The brooder has two 7-watt lights; one is an attraction light and is always on, the second light only comes on when the heater is on.

## 8. Finch and Pigeon Cage Procedures

- a. Ideal capacity should be maintained at 1 finch per extra small cage, 2 finches per small cage, 3 breeding pairs or 10 or less females/juveniles per flight cage. Pigeons are housed with a minimum of 0.8 sq feet per animal when group housed. Additional space is provided when singly housed to ensure the ability to make normal postural adjustments.
- b. Water trough is filled, at a minimum, twice daily. Water trough is removed and cleaned thoroughly daily.
- c. Feed trough is removed, cleaned thoroughly, and re-filled daily.
- d. Perches are cleaned weekly using a 10% bleach solution.
- e. Cage liners are changed every other day.
- f. Cages are hand-washed/wiped weekly with 10% bleach solution.
- g. Cages are washed thoroughly with Sporicidin every two weeks rinsed and allowed to air dry. Flight cage components (e.g., galvanized metal) are not compatible with cage wash equipment.

## 9. 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 are 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 is left in the room.
  3. Check and replenish supplies (e.g., soap, paper towels) as needed.
  4. Wipe down counter/sink areas with Sporicidin.
  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 bleach solution (1:10 dilution).
- c. Weekly room duties include:
  1. Sanitize mop head.
  2. Wipe down door and doorframe with Sporicidin.
  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 (HOBO) and record.
  3. Wash walls with Sporicidin as needed.

Approved:

Date: