



TITLE: Terrestrial Amphibian Husbandry

SOP Category: Husbandry

RUAC SOP #: 3.12

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Effective Date: 05/11/2018

Approval: Lisa Antonucci

Revisions: 10/13/2021, 1/7/25

SCOPE:

This document provides direction and guidance on the daily husbandry and care of terrestrial amphibians, including American bullfrogs (*Lithobates catesbeianus*) and northern leopard frogs (*Lithobates pipiens*), housed in Rutgers University animal facilities. This SOP applies to all Animal Care Staff (ACS), ACS Supervisors (ACSS), Veterinary Staff (VS), and Research Staff members (RS) at the New Brunswick and Piscataway facilities.

OBJECTIVE:

The objective of this SOP is to ensure that all amphibians are cared for in a humane manner and in accordance with *The Guide for Care and Use of Laboratory Animals*.



PROCEDURES:

Animal Receipt

- Upon arrival, disinfect the outer surface of the shipping container with an approved disinfectant.
- Transport frogs to the animal housing room.
- Remove frogs from packing container, dip in a **salt bath*** and examine for obvious lesions.
- Place the animals in a previously prepared clean frog container.
- House any frogs with health concerns in a separate bin marked "use first," and notify VS.
- Add a paper cage card to each bin, circle number of frogs inside and update census.
- Review the paperwork and give to the ACSS.

Daily Care and Husbandry

Housing

- House frogs in commercially available, clear plastic, lidded 53-liter (14 gallon) bins with ½ inch holes drilled into the top for ventilation.
- Add two to three inches of dechlorinated water to each bin.
- No more than 8 medium or 5 large frogs should be housed per bin.
- Elevate the bin approximately 2 inches at back end (use a ventilated mouse lid) to allow the animals to rest in a dry area of the bin.
- Add a shelter or hut (*no chewed or sharp edges*) as an additional resting spot.



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Food

- Frogs are fed a pelleted diet provided by vendor, Nasco Adult Frog Brittle, or PMI CU Adult Frog Diet 5718.
- Feed 6-12 pellets per frog. This amounts to 1 rounded capful of pellets from a 12-cc syringe case per 4-5 adult frogs housed per tub.
- Feed frogs every other day (Monday, Wednesday, Friday).
- 2-3 hours after feeding, remove remaining food particles from tub and replace water.

Water

- Tubs get ½ to full water changes daily.
- Condition water **24-48 hours prior to use** with water conditioner and aquarium salt.
- Add the prescribed amount of chemical water conditioner and NaCl (salt) to remove free chlorine, chloramine and heavy metals based on product label.
- Add 1 ml water conditioner and 24g NaCl to a standard 20-liter standard rat box filled with municipal water and allow to dechlorinate (age) for 24-48 hours*.
- Using **API Tap Water Conditioner** and **API Aquarium Salt**, follow chart below:

Liter	Gallons	API Conditioner volume	NaCl (salt)
1	0.26	0.05 ml	1.2 g
10	2.6	0.5 ml	12 g
20 (rat box)	5.28	1 ml	24 g
53 (frog bin)	14	2.7 ml	64 g
115	30	5.8 ml	138 g

Cleaning

- Clean the siphon hose by submerging it in a container of 2% bleach/water solution.
- Rinse the siphon hose by submerging it in plain water.
- Siphon 50%-100% of the water from the tub.
- Replace the volume of water siphoned from the tub with an equal volume of conditioned water.
- Once per month transfer frogs to clean tubs containing conditioned water.
- Clean dirty tubs by scrubbing and rinsing with water or wash in rack washer with frog cycle (no detergent). *Do not use soaps or other disinfectant to clean tubs.*

Enrichment

- See SOP #6.08 Frog Environmental Enrichment

Room Maintenance

- See SOP #3.01 Room Check/Care Procedures

*Salination of frog water for stress reduction and disease prevention:

- Add .05 ml water conditioner and 1.2g of NaCl per liter of water to achieve a 20 mM concentration.
- Allow water to age and dechlorinate for 24-48 hours before use.
- For 20 liters of water (rat box), add **1 ml conditioner and 24g NaCl**.

