

## Standard Operating Procedure for General Husbandry of African Clawed Frogs (*Xenopus laevis*)

### Purpose

African Clawed Frogs (*Xenopus laevis*) are susceptible to stress and water condition related diseases such as red leg and gas bubble disease. These husbandry procedures will be followed to ensure their health and well-being. Additional information is available in “*The Laboratory Xenopus sp.*” Handbook.

### Housing Parameters

1. *Xenopus laevis* are housed in Aquaneering frog tanks using 50 liter (10-13 gallon) and 16 liter (4 gallon) tanks.
2. The Aquaneering system consists of a four stage filtration and recirculation system with manual siphoning and drain control tanks.
3. Water conditions are monitored through the Aquaneering recirculation system.
4. Room conditions are monitored through the Edstrom system.
5. Additional water parameters are monitored by using external water testing devices and products. The monitored parameters include:
  - a. pH: 6.9-7.9 average 7.2
  - b. Conductivity: 475-575us average 525us
  - c. Water temperature: 16-24°C (60-75°F) average 21°C (70°F)
  - d. 12:12 light cycle unless otherwise stated per experiment
  - e. Room temperature approximately 22°C (72°F +/- 2°F)
  - f. Other water qualities that are periodically monitored are nitrates, nitrites, ammonia and TDG (total dissolved gases)

### Density Parameters

1. Males are housed at 1 gallon per frog
2. Females are housed at 2 gallons per frog
3. Specific densities may vary due to frog size and population

### Husbandry Procedure

1. Frogs are checked daily for health conditions.
2. Illnesses and injuries are documented on a Vet Log and reported to the veterinarian
3. Tanks are changed and sanitized at minimum every 8 weeks. Tanks should be changed in the morning to avoid stress during feeding time (see Pro Aquatic Tank Sanitation).
4. Room sanitation and system maintenance is done according to charts posted in the animal room.

### Feeding Procedure

1. *Xenopus laevis* are fed Nasco™ frog brittle in the afternoon to the avoid stress of daily room activities during feeding.
2. Male *Xenopus sp.* are fed Monday, Wednesday and Fridays at 6 pellets per frog.
3. Female *Xenopus sp.* are fed Monday through Friday at 10 pellets per frog.
4. Singly housed frogs may consume fewer pellets than the prescribed amount. Adjust food amounts offered accordingly to avoid excessive food debris.
5. Wait 30 minutes after each feeding and introduce additional pellets as needed throughout the population.

### Sanitation Procedure

1. Nets may be labeled and designated per group or experiment. Nets are cleaned monthly in the cagewash machine.
2. Mop the room monthly using Labsan-256 CPQ® (quaternary ammonia solution).
3. Clean the trench quarterly using Labsan-256 CPQ®.
4. Food containers are cleaned monthly.
5. Trash cans are cleaned quarterly.
6. All buckets transporting or holding frogs are cleaned after each use.