# **Frog Eggs**

## Salmonella precautions

Always wash your hands after touching an amphibian or any part of an amphibian's habitat. For more information, see our <u>Amphibians, Reptiles, and Prevention of Salmonella Transmission</u> statement.

### Immediate care and handling

As soon as your order arrives, open the shipping box and, without opening the shipping bags, inspect your eggs. Leave the bags sealed until the tadpoles emerge.

If you plan to use the frog eggs for embryology, see the "Care and handling for egg development studies" section below. Otherwise, go to the "Hatching frog eggs for life cycle studies" section of this care sheet.



## Care and handling for egg development studies

Leave the eggs in their shipping bag until just before the lab. Use them as soon as possible to avoid missing the early stages of development. If you must delay their development, you can cool the bag to 4 to 10° C (39 to 50° F). Be aware that this may cause higher mortality and increase the risk of deformed tadpoles.

Be sure that all of your instruments and glassware are clean and free from any chemical residues. Do not use instruments that are plated with chromium; use stainless steel instead.

Open the bag and place no more than 25 to 30 eggs in each culture dish. Add 1 to 2 cm of spring or pond water and observe them under a stereomicroscope.

# Hatching frog eggs for life cycle studies

To protect the frog eggs from infection or contamination, leave them in the sealed shipping bag until the tadpoles emerge. The bag is filled with oxygen and has enough water for the eggs to develop. Keep the bag at temperatures of 18 to 20° C (64 to 68° F). Do not put it in direct sunlight, under a heating or cooling vent, or in other conditions that could cause rapid temperature changes.

When the tadpoles first emerge, they may be inactive or fall to the bottom of the bag. Wait until the tadpoles are actively swimming before you open the bag and begin to acclimate them to their new habitat.

The habitat should be glass, plastic, or stainless steel, and it must not have any detergent residues. Fill the habitat with spring water, pond water, or dechlorinated tap water only. Do not use distilled water. Spring water is available from Carolina (item #132450) or at the grocery store. If you purchase bottled spring water from the store, check the label to make sure it contains no additives. If you use tap water, you must treat it with a chemical water conditioner to remove chlorine and chloramines.

Acclimatize the newly emerged tadpoles before transferring them to their habitat. In addition to the habitat, you will also need a second empty container to pour the bag into during the acclimation process.

To acclimatize the tadpoles:

- 1. Fill the habitat with spring water or conditioned tap water and set the bag next to it.
- 2. Wait 30 minutes to allow the temperatures of the habitat and bag to equalize.
- 3. Open the bag and gently pour its contents into an empty container.
- 4. Use a dropping pipette to remove and discard the clear, jellylike mass left over from the eggs.
- 5. Remove about  $\frac{1}{4}$  of the shipping water and replace it with water from the habitat.
- 6. Wait 15 minutes, then repeat step 5.

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7. After another 15 minutes, use a net to gently transfer the tadpoles into the habitat. Avoid getting water from the shipping bag into the habitat. The tadpoles are now acclimated to their new environment.

See our <u>Tadpoles Carolina™ CareSheet</u> for additional information on rearing your tadpoles.

#### **FAQs**

#### How long will it take our eggs to hatch?

Eggs usually hatch within 4 to 10 days.

#### What is the difference between the various frog eggs I can order?

Our field-collected frog eggs, item #146435, are the best choice for life cycle studies. The frog eggs in item #146430 are usually slightly younger than item #146435, making item #146430 a better choice for studies of egg development. Those eggs will be either field-collected or artificially fertilized in the lab, depending on the season. Xenopus eggs, item #146630, are also a good option for embryology. Be aware that Xenopus develop quickly, so the eggs will already be in late stages by the time you receive them.

#### What species do we have?

We ship a variety of species depending on seasonal availability. Refer to any information we sent with your order to determine which species you received.

#### Why is part of the egg dark and the other part light?

This difference is visible in early-stage eggs. The lighter part of the egg is the yolk. The darker part, sometimes called the "animal pole," is the developing embryo.

#### Our tadpoles aren't moving. They are curled up and some are on the bottom of the bag. Are they dead?

They are probably still maturing. Newly hatched tadpoles often curve into a comma shape as a normal stage in their development. Be patient and you will soon have active tadpoles. Wait until the tadpoles are freely swimming before you transfer them out of the bag; otherwise, they are too young and may not survive the disturbance.

#### We had lots of eggs but only 4 tadpoles hatched. What went wrong?

Having only a few eggs hatch is normal. Mortality of native frog eggs is often extremely high, and the eggs may not have been fully fertilized. Even with excellent care, we expect about a 50% hatch rate. Be sure to leave the eggs in the sealed shipping bag to optimize your chances of success.

#### **Problems?**

We hope not, but if so, contact us. We want you to have a good experience.

- Orders and replacements: 800.334.5551, then select Customer Service
- Technical support and questions: caresheets@carolina.com

