Northern Leopard Frog – *Rana pipiens*

Classification:

Kingdom:	Animalia
Phylum:	Chordata (having a notochord, dorsal nerve cord, postanal tail)
Subphylum:	Vertebrata (cartilaginous or bony vertebrae surround nerve cord)
Class:	Amphibia (non-amniotic, ectothermic, tetrapods)
Order:	Anura (tailless amphibians, toads & frogs)
Family:	Ranidae (true frogs)

Natural History

Frogs, toads, caecilians, and salamanders are the members of the **class Amphibia** (Amphi – meaning "on both sides" and bios – meaning "life). As a group, amphibians are semi-aquatic and semi-terrestrial. They always require water, at the very least, for reproduction. Most amphibians undergo **metamorphosis** from a juvenile water-breathing form to an adult air-breathing form.

Frogs belong to the **Order Anura** (an – "without" and oura – "tail"). Most frogs are characterized by a short body, webbed digits (fingers or toes), protruding eyes and the absence of a tail. Frogs are widely known as exceptional jumpers, and many of the anatomical characteristics of frogs, particularly their long, powerful legs, are adaptations to improve jumping performance. Due to their permeable skin, frogs are often semi-aquatic or inhabit humid areas, but move easily on land. They typically lay their eggs in puddles, ponds or lakes, and their larvae, called **tadpoles, have gills** and develop in water. While tadpoles are **herbivorous,** adult frogs follow a **carnivorous** diet, mostly of arthropods, annelids, and gastropods. Frogs are most noticeable by their call, which can be widely heard during the night or day, mainly in their mating season. Check out these **recorded frog calls**: http://animaldiversity.org/collections/frog_calls/

Most frog species are found in tropical rainforests. Consisting of more than 5,000 described species, they are among the most diverse groups of vertebrates. However, populations of certain frog species are declining significantly. Many species are now threatened or endangered. Sadly, several species have succumbed to extinction.

A popular distinction is often made between frogs and toads on the basis of their appearance, but this has no taxonomic basis. (Members of the anuran family Bufonidae are called true toads, but many species from other families are also called toads.) Frogs have smooth skin, while toads have drier, often warty skin. There is a myth that you can catch warts from toads. This is not true. Warts are caused by a viral infection that is not transmitted by toads.

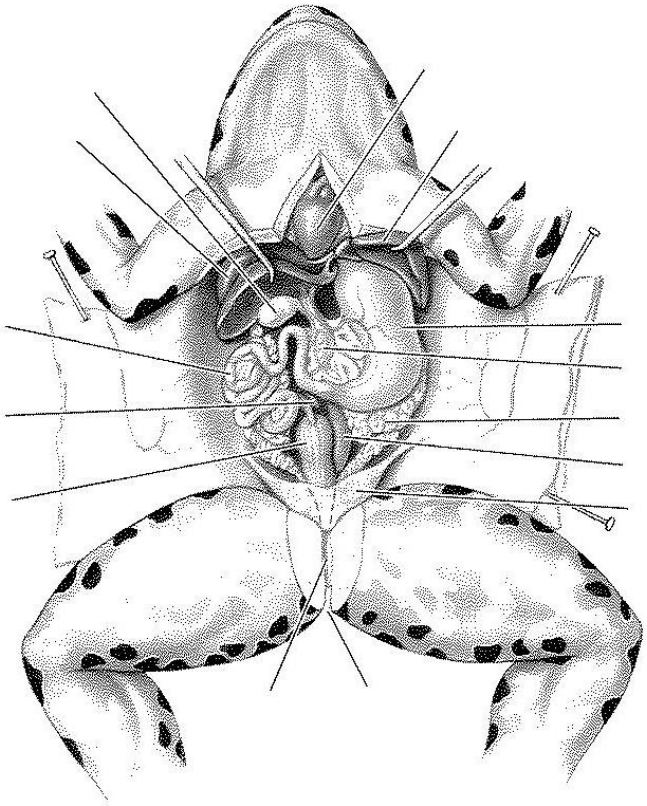
Frog skin (**integument)** is thin, moist, and attached loosely to the body at only a few points. The inner layer of epidermis has two types of integumentary glands. **Mucous glands** produce a protective, waterproofing secretion. Large, **serous glands** produce a whitish, watery poison. You may have seen dogs foaming at the mouth after putting a toad in their mouth due to this poison. Specialized pigment cells, **chromatophores**, produce skin color in frogs. Many frogs can adjust their color to blend with their background and thus camouflage themselves.

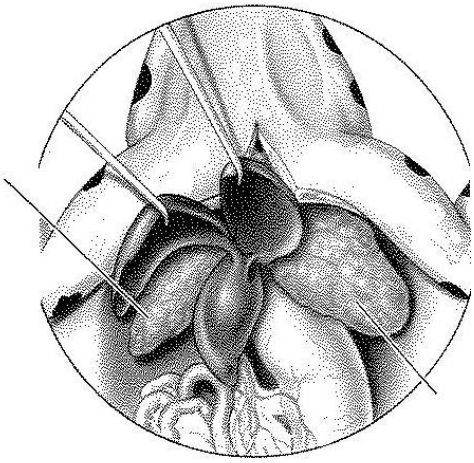
In addition to their ecological importance, frogs have many cultural roles, such as in literature, symbolism and religion, and they are also valued as food and as pets.

Abdominal cavity of a frog, ventral view.

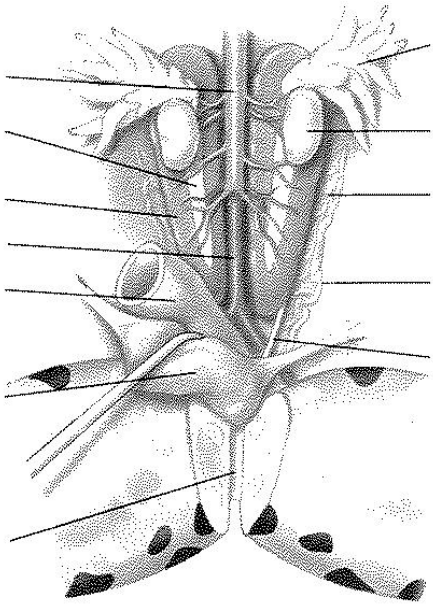
At right, the liver has been lifted to expose the lungs.

Organ System	Structures to Identify
Circulatory	Spleen, Ventricle of heart
Digestive	Gallbladder, Large Intestine, Liver (left lobe), Liver (right lobe), Pancreas, Small Intestine, Stomach
Excretory	Bladder, Cloaca, Cloacal opening, Kidney
Reproductive	Ovary
Respiratory	Left Lung, Right Lung





Urogenital System of a Male Frog, ventral view

Structures to Label	Male Frog
A. Adrenal gland B. Aorta C. Cloaca D. Fat body E. Kidney F. Large intestine G. Mesorchium H. Postcava I. Testis J. Ureter K. Urinary bladder L. Vestigial oviduct	

Urogenital System of a Female Frog, ventral view

Structures to Label	Female Frog
M. Adrenal gland N. Aorta O. Cloaca P. Gallbladder Q. Kidney R. Large intestine S. Liver (deflected) T. Mesotubarium U. Mesovarium V. Neck of urinary bladder W. Ovary X. Oviduct Y. Ovisac Z. Postcava AA. Stomach (cut) BB. Wolffian duct