

Meeting Your Aquatic Neighbors

Using A Field Studio To Document
Backyard Pond Life

Article and Photos by Zach Pezillo



Introduction

“To take a photograph of a person is to lay bare their identity to the eyes of others.” ~Nicolas Franchitto et al. This notion applies not just to people but to nature as well. Photographing flora and fauna can give nature a voice that it otherwise would not have.

When one thinks of nature photography, images of exotic animals and spectacular landscapes in faraway places are most often what come to mind. But what of the wildlife that exists in our own neighborhoods? Field Studio, a type of photography currently gaining in popularity, is bringing new attention to nature from the most innocuous of places – our own backyards.

Field Studio is defined by the use of a seamless white backdrop and special lighting that enables the photographer to isolate and illuminate the subject on location and in an innovative and exciting way. The most common of creatures or plants is transformed with surprising detail and vivid color allowing the viewer to gain a new and better understanding of nature all around us, even in our own backyards.

While the technique itself isn't new, current interest in it can be credited to Niall Benvie and Clay Bolt, founders of a worldwide photographic initiative called Meet Your Neighbors. The goal of this project is to create a global awareness and appreciation of nature in our own communities and the important role it plays in all of our lives.

This article features some of the numerous aquatic inhabitants commonly found in Mendon Ponds Park in Rochester, New York.

The Field Studio

Protocol

Field Studio subjects are photographed alive and in their natural environment. With the use of specialized equipment, the photographer creates a brilliantly lit white background - the hallmark of the Field Studio technique. With the help of strategically placed lighting, all outside factors are thereby removed and the subject alone becomes the focal point of the photograph.

In order to create successful images using this technique, it is essential that the background of each image be uniformly 100% pure white.

Additionally, a diffuser should be used on the front light source in order to remove all evidence of shadow on and around the subject.

Finally, each subject should be treated with the utmost care. Handling should be kept at a minimum and all subjects returned to their original environment as soon as possible.

Equipment Used:

- Canon 5D Mark III
- Canon 100mm Macro
- Canon 65mm Macro
- A tripod to support the camera
- 2 Speedlite 580EX II Flashes
- A 3mm sheet white plexiglass/acrylic
- A flash diffuser for the on camera flash
- Stands for the plexiglass
- Container for confining subjects if needed
- Also, be sure to shoot in RAW file format



Black Worms

Lumbricus Variegatus

Habitat:

Black Worms are commonly found in the muddy sediments along the shallow edges of marshes and ponds throughout North America and Europe.

Characteristics:

The worms are usually between 150 and 250 segments long. They are invertebrates yet still maintain their form due to the fluid inside of them.

Feeding:

Decaying vegetation and small microorganisms are their main source of food. They use their heads to forage while their tails, which are used mainly for gas exchange, stretch upwards in the water.

Reproduction:

Black Worms mainly reproduce through the process of fragmentation: they break apart and the new segments regenerate the rest of the body to form a new worm.



Ramshorn Snail

Planorbis Planorbis

Habitat:

The Ramshorn Snail can be found in the calm waters around lakes, ponds, streams, and marshes in areas that are rich in plants.

Characteristics:

Unlike most aquatic snails, the Ramshorn Snail breathes through lungs and has to periodically go to the surface for air. They are also one of the few snails that have red blood. Their size can range from only a few millimeters to a few centimeters in diameter.

Feeding:

Their diet can include anything from algae and decaying plants to dead fish and eggs. They will also eat blue-green algae which is toxic to humans and other organisms.

Life Cycle:

Ramshorn Snails are only a couple of millimeters long when they first hatch from eggs and clear in color due to the lack of pigment in their shell. Once mature, they will have both male and female sex cells in which to create offspring. Depending on the living conditions, the snails can live anywhere from 1 to 2 years.



Juvenile Ramshorn Snail



Adult Ramshorn Snail with Juvenile to Scale

Bladder Snail

Physidae

Habitat:

The Bladder Snail can be found in ponds, lakes, streams, and slow moving rivers alongside channels.

Characteristics:

These snails have small, transparent, cylindrical shells that range from grey to light brown in color. The shell always coils to the left and the opening of the shell, the aperture, is oval. The body of the snail is usually yellow or gray and has one pair of skinny tentacles.

Feeding:

Similar to the Ramshorn Snail, the Bladder Snail eats algae and decaying plants as well as diatoms.



Creeping Water Bug

Pelocoris Femoratus

Habitat:

The Creeping Water Bug can be found swimming in quiet grassy or reedy waters along the edges of ponds, lakes, and streams.

Characteristics:

This insect is characterized by its flat back and oval shape. It can be anywhere between 5 and 16 millimeters in length and when submerged, it breathes the air that it keeps stored under its wings.

Feeding:

It commonly feeds on small aquatic organisms such as insects, worms, snails, and small fish. When hunting, it uses its large forelegs to grab and hold onto prey as it feeds.

Handling:

If handled, the Creeping Water Bug will strike out with its raptorial forelegs and can give an unpleasant bite leaving a burning sensation that lasts awhile.



Water Boatman

Corixidae

Habitat:

The Water Boatman is often found in ponds, streams, stagnant pools, puddles, and occasionally bird-baths.

Characteristics:

They can be seen swimming right-side up and kicking out with their powerful, feathered hind legs. They are also able to fly but remain aquatic for the most part.

Feeding:

They mostly eat algae and decaying aquatic plants. However, they are also known to feed on other small aquatic organisms such as mosquito larvae.

Singing:

A subspecies of this insect, the Lesser Water Boatman, is best known for its ability to produce a sound of almost 100 dB, comparable to the sound of a freight train passing by. Though much of the sound is lost when traveling through the water, it can still be heard above water along the edges of the pond.



Water Flea

Daphnia

Habitat:

Daphnia are highly diverse creatures and are found in a wide range of habitats from freshwater lakes to saline tidal pools.

Characteristics:

They are usually between 1 and 5 millimeters in length and move through the water using their second set of antennae in an almost jumping motion, hence the common name water flea.

Feeding:

Daphnia are filter feeders. They use their legs to catch food, mainly algae, protists, and bacteria. They also use their legs to create a current, bringing food through the mouth and into the digestive tract.



Water Louse

Assellus Aquaticus

Habitat:

Water Louse are commonly found hiding under stones in rivers, streams, and ponds. Because they can tolerate low levels of oxygen, they can also be found in pools of stagnant water.

Characteristics:

Closely related to the Wood Louse, the Water Louse is around 10mm long. It has a flat body comprised of nine segments. The last and largest segment protects the gills.

Feeding:

They mainly feed on decaying organic matter including dead animals.



Damselfly Nymph

Coenagrionidae

Habitat:

Damselfly Nymphs are often found in quiet ponds and streams. They tend to hide among the grasses and plants along the bottom for protection.

Characteristics:

They have three external gills located at the end of the abdomen that resemble fins. Damselfly Nymphs also have a prehensile jaw that extends down below their head. They are capable of shooting it out at high speeds to catch prey.

Feeding:

Being carnivorous, the nymphs will feed on mosquito larvae, daphnia, tadpoles, and other small aquatic organisms.



References

"Aquarium Snail FAQ." Aquarium Snails. N.p., n.d. Web. 8 Dec. 2013. <<http://www.sydneycichlid.com/aquarium-snail.htm>>.

Benvie, Niall. "Field Studio Technique & History." Meet Your Neighbours. N.p., n.d. Web. 9 Dec. 2013. <<http://meetyourneighbours.net/field-studio-technique-history/>>.

"Creeping water bug (insect)." Encyclopedia Britannica Online. Encyclopedia Britannica, n.d. Web. 8 Dec. 2013. <<http://www.britannica.com/EBchecked/topic/142467/creeping-water-bug>>.

"Daphnia." Wikipedia. Wikimedia Foundation, 12 July 2013. Web. 8 Dec. 2013. <<http://en.wikipedia.org/wiki/Daphnia>>.

"Family Corixidae - Water Boatmen." Welcome to BugGuide.Net! - BugGuide.Net. N.p., n.d. Web. 8 Dec. 2013. <<http://bugguide.net/node/view/4964>>.

Franchitto N, Gavarrri L, Dedouit F, Telmon N, Rouge D: Photography, patient consent and scientific publications: medicolegal aspects in France. J Forensic Leg Med 2008, 15(4):210-212.

"Micronecta scholtzi." Wikipedia. Wikimedia Foundation, 28 Oct. 2013. Web. 8 Dec. 2013. <http://en.wikipedia.org/wiki/Micronecta_scholtzi>.

"Muscular and Support Systems." Lumbriculus variegatus. N.p., n.d. Web. 8 Dec. 2013. <<http://www.eeob.iastate.edu/faculty/DrewesC/htdocs/Lvgen4.htm>>.

"Odonata (dragonflies and damselflies)." Odonata, damselflies. N.p., n.d. Web. 10 Dec. 2013. <<http://www.bumblebee.org/invertebrates/Odonata1.htm>>.

"Pelocoris femoratus." , Creeping Water Bug in the family Naucoridae. N.p., n.d. Web. 8 Dec. 2013. <<http://www.americaninsects.net/ht/pelocoris-femoratus.html>>.

"Ramshorn Snails." HubPages. N.p., n.d. Web. 7 Dec. 2013. <<http://tamarind.hubpages.com/hub/Ramshorn-Snails>>.

Thorp, James H., and D. Christopher Rogers. Field guide to freshwater invertebrates of North America. Burlington, MA: Academic Press, 2011. Print.

"Water Hoglouse (Asellus aquaticus)." Life in Freshwater. N.p., n.d. Web. 30 Nov. 2013. <<http://www.lifeinfreshwater.org.uk/Species%20Pages/Asellus.jpg.html>>.



About the Author

Zach is from Maui, Hawaii where he grew up with a boundless supply of fascinating subjects to photograph.

Currently he is a third year student at the Rochester Institute of Technology where he is majoring in Scientific Photography. He recently completed an internship in medical photography at the University Hospital of Wales, UK. Most recently he has been invited to join the Meet Your Neighbours team and is looking forward to making Field Studio contributions of his backyard friends from both Hawaii and New York.

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