

Point-and-Shoot Digital Photography for the Beginner

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Photographs by the author.

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any NANFA members who enjoy seeing native fishes in the wild also enjoy bringing them home. But sometimes our desire exceeds the capacity of our aquaria. The following tips are designed to help you bring your streamside memories home while leaving the fish in theirs. In addition, I've provided a few tips on photographing fishes in your home aquaria (where many streamside techniques apply as well).

- Avoid any camera that requires special batteries since it's difficult to recharge streamside.
- Ignore special features when selecting a camera.
- Consider a camera with manual functions to accommodate your future skill level (but don't make this a priority).
- Almost all fish photos are produced in macro mode, so buy a camera that does this well.

Camera Choice

In choosing a camera it's most important to find one with which you're comfortable and is easy to use. Many Web sites offer product reviews that can help you decide which model might be right for you. A trusted camera shop will also prove useful since a camera that can take good macro shots (close-ups) will also produce good family snapshots. Once you have an idea of which model you like, take the time and review the camera instruction manual. All major manufacturers offer complete operation manuals online.

Pay particular attention to photo quality in the macro mode. Most camera shops and electronic superstores have functioning models to help you make a purchasing decision. I recommend you bring along a small piece of fabric and place it on the counter. Set the camera to automatic and additionally to macro mode. Since you've already read the operation manual, this should be easy! Place the camera lens 2-4 inches away from the fabric and half-depress the shutter button to make sure the camera can easily focus at this range. It's also a good idea to bring a small familiar object (grid paper or coin) to make sure the camera is actually focusing correctly at this range.

Memory

The memory card that comes with your camera will be insufficient, so make sure you budget for memory before you buy a camera (plus camera case, tripod, and any other gadgets you might need).

Not all memory is created equal! There are two things to consider when buying memory: speed and size. Digital cameras take time to write to the memory card. Some memory is "high-speed" and writes quickly, while slower memory cards require a wait between photos that may cause you to miss the shot of a lifetime. Ask the salesperson if a high-speed card will enhance the camera you intend to buy since some cameras simply write slowly and a high-speed card will be of no use. Memory has never been more affordable; a two-gigabyte high-speed memory card costs around \$40.

The size of card you select directly relates to the number and size of the photos you take. A typical point-and-shoot camera with a 512-megabyte card holds between 250 and 500 photos, and almost double that for a one-gigabyte memory card. You might think this is an outrageous number of photos but it's very easy to fill up a memory card with all of the free shots. A big advantage to a large memory card is the fact that



▲ Redfin Shiner, *Lythrurus umbratilis*, male.



▲ Bigeye Shiner, *Notropis boops*.



▲ Spottail Shiner, *Notropis hudsonius*.



▲ Bluenose Shiner, *Pteronotropis welaka*, male.



▲ Highfin Carpsucker, *Carpiodes velifer*.



▲ Brindled Madtom, *Noturus miurus*.



▲ Bayou Topminnow, *Fundulus notti*.



▲ Spottail Darter, *Etheostoma squamiceps*.



Fig. 1.

Photo tank with acrylic “paddle” to hold fish in place. The paddle should be slightly smaller than the inside dimensions of the tank.



Fig. 2.

Wait a few moments for your fish to calm down, then use the paddle to position it in the center of the tank.

you can feel free to learn how to use your camera and experiment with photo styles and lighting.

Editing Software

Editing software is important if you want to share your photos or display them on the Internet. Software can also fix many of the minor issues overlooked while snapping the photo.

I use software to quickly straighten and crop images—usually in less than 30 seconds. Many programs have “auto fix” features that adjust exposure and contrast. If you don’t like the results of your edit, you can simply “undo” your last action and restore the photo to the original. Software can run from free to several hundred dollars. For ease of use I recommend any of the Microsoft photo-editing programs. These are often bundled in Works suite packages, so you might have one of these programs already installed. If you don’t, Corel Paint Shop Pro is an excellent program for a fair price (around \$40). Before you run out and buy a photo-editing program, make sure to right-click on a photo file and see what programs might already be available to perform the work you want.

Streamside Photos

Be sure to handle the fish carefully with a soft net; fins are easily torn and some fishes have deciduous scales. Inspect the fish carefully for quality and quickly place it in your holding container. I can’t stress enough the importance of the holding container. Most darters, sunfishes and especially minnows, benefit from dark holding containers. I prefer blue,

green or black. Most fishes don’t unnaturally darken in dark containers. (*Nothonotus* darters, however, are an exception; a lighter container should do the trick with them and perhaps other species as well). Containers that are too light will wash all of the beautiful colors from your fish in just a few minutes. So no white coolers or buckets!

I like white lids to help keep the temperature of the water as cool as possible on sunny days. And be sure to use a soft aquarium net to take fish from the holding container to the photography tank.

Many options are available for photo tanks and some can be purchased from pet shops. The first option is a “specimen container.” This is the small acrylic box used to hold the fishes before the clerk places them inside the bag for transport. These are inexpensive (under \$10) and easy to use. Another option is a 2½-gallon glass aquarium. These are great for slightly larger fishes but do not transport well.

You can also build your own photo tank from glass/acrylic cut from your local hardware store. Glass photo tanks should be constructed with silicon as the glue, while acrylic tanks require a special solvent to weld the pieces together. In either case, don’t be discouraged if your first attempt fails. If you plan on constructing your own acrylic photo tank, I recommend visiting:

<http://duboisi.com/diy/BNdiytank/bndiytank.htm>

If you intend to make a glass tank, check out:

http://saltaquarium.about.com/od/diy-tanksrefugiiums/DIY_AquariumTank_Plans.htm

Neither of these sites is specific to building photo tanks, but the same principles apply, just on a smaller scale.

No matter what type of photo tank you use, a photo “paddle” (Fig. 1) will greatly improve photo quality and/or reduce the amount of time you spend taking photos. The paddle is simply a 1/8”-thick piece of painted acrylic cut slightly smaller than the inside dimensions of the photo tank. To make your own paddle you can either have the piece cut by your local hardware store, or you can cut it at home with a saber saw with a fine-tooth blade. Round the corners with sandpaper and finish all edges smooth to prevent injuring fish and scratching the tank. Then use #400 grit sandpaper to roughen the surface of the acrylic to prepare it for painting. Use flat or primer spray paint to reduce glare. White is good for one side; use a dark color on the other side if desired.

Now that you have a photo tank-and-paddle combination (and a freshly caught fish), you’re ready to select the location to take photos. Since level ground (or picnic benches) aren’t always available, I often use the trunk of my car. When my car is parked on a slope, I use a bath towel to level the tank.

Choose an area with direct sunlight and, if possible, position the tank so that the sun is located at the 5- or 7-o’clock position. Check your tank for cleanliness and add clear water. On days when I suspect the water will be turbid, I bring either bottled drinking water or dechlorinated tap water.

In ideal conditions, set your camera to automatic and to the macro mode. Make sure the camera is set to the largest photo size and the highest resolution possible. Use a tripod if you have one but it’s not always required in bright light. Place the fish in the tank and step back for a few moments to allow the fish to settle down. Once the fish is calm, use the paddle to hold the fish in place (Fig. 2). With most minnows and sunfishes you can gently squeeze the fish to hold it in position. Madtoms and many darters may require a different approach. Try to gently squeeze the fish and see if the fish looks natural. If not, allow the top of the paddle to rest on the back of the photo tank and the bottom to rest on the bottom front of the tank. A gentle nudge with a blade of grass will often coax the fish to the center of the tank.

Hold the camera perpendicular to the subject and depress the shutter button halfway down. Most cameras will signal what the camera is focusing on by means of sound and a display on the LCD. Make sure the camera is focusing on the subject, or the correct area of the subject, and begin taking pictures. Try to vary the vertical axis slightly but avoid adjusting your horizontal axis since this tends to distort the major features of the subject.

If you have reflection problems (especially with a dark background) you can drape a cloth around the camera and the tank, but not over the top of the tank. This will greatly reduce reflections.

On cloudy days, take photos as you would on sunny days, but use a tripod. Your camera will most likely warn you that a tripod will be required based on the available light. By holding the fish in position with the paddle (I recommend a light-colored paddle on cloudy days) in combination with a tripod, your photos should turn out pretty well. If your camera wants to use its flash, disable it and see if the photos turn out okay. If not, you can either change the camera to “action mode” (usually represented by an icon of a person running), or adjust the manual settings. If you use the “action mode,” the shots will often appear grainy. But a grainy shot is better than no shot at all.

Home Aquarium Photos

Almost everything that applies to streamside photos applies to taking photos of fish in your home aquaria as well. Obviously, you don’t want a paddle inside your home aquarium. Nor can you move your aquariums outside into bright sunlight. Therefore, inside photo quality will depend on having a motionless fish while flooding the fish with light.

First, make sure the glass is perfectly clean, inside and out. If any algae or streaks are present, the camera will tend to focus on the dirty glass instead of the fish. Since less light is available, your camera will automatically keep the shutter open for a longer period, making a tripod mandatory. And unless you’ve tripled the amount of lighting that’s usually supplied on aquarium hoods, I’d recommend a supplemental light source. You can add a fluorescent light strip to the front lid, but deeper tanks often require removing the entire aquarium hood and using halogen work lights or a similarly powerful light source. Double 500-watt halogen work lights, with a tripod stand, are often available at home improvement stores for \$30-\$40. When using halogen lighting, avoid keeping the lights on for extended periods since they produce intense heat and can quickly raise the aquarium temperature.

With a supplemental lighting set-up, clean glass and a tripod, you’re almost ready to shoot. Many cameras have settings to accommodate indoor lighting sources. Double-check the operation manual and match your camera to the supplemental lighting style (e.g., fluorescent, halogen). Turn off all room lights off and close all curtains. I usually turn off the other aquarium lights in the room to

Thomas, “Point-and-Shoot,” cont. from p. 20 make the room completely dark. Position the camera squarely with the tank since angle shots will appear distorted. With the camera set to automatic (and possibly macro, depending on the subject), half-depress the shutter button and see how the camera wants to shoot the photo. If the camera wants to use the flash, disable it. It’s best to start on stationary or slow-moving fishes at first. If the subject remains somewhat still and your shots are blurred while in focus, extra lighting is probably needed. If shots are continually out of focus, double-check the glass for streaks and/or algae and make sure you’re using a tripod. Fast-moving fishes require either extremely intense light (along the lines of 2000 watts for a standard 55-gallon tank), or you can use the camera’s flash.

When using the flash, color will often look unnatural. In addition, bright reflections from the glass may ruin the shot. In order to reduce flash reflection, slightly angle the camera to force the reflection away from the subject. The reflection can then be edited from the photo with software. You can also

place the camera lens directly against the glass. This will give you the benefits of the flash while keeping the reflection out of the field of view.

Final Thoughts

Up to this point I’ve tried to keep all camera adjustments to a minimum, but for home photography manual adjustments can yield better photos. Since each camera is different and lighting conditions and subjects are diverse, providing an easy-to-follow guide for better photos is impossible. But I do recommend taking several photos with as little manual functions as possible to give you a base line. Once you’re comfortable with taking photos in the above style, you should seek more information (books or online) about camera basics. With an hour of reading you’ll feel comfortable in manually adjusting your camera, and you’ll easily see the results of your adjustments in improved photo quality. Your only expense will be batteries. 