The Compositional Crop & Speed

ISO speed and cropping for better images

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This month we take a look at two adjustments that give you better control over the quality of the final underwater image. One is employed before you take the image and the other after the fact.

ISO SPEED

This is an adjustment to both film and digital cameras, so let's look at why you even need different ISO speeds. As the light level gets lower underwater, you need to increase the recording sensitivity of your recording medium, whether it is film or a CCD or CMOS sensor. This insures adequate exposure and increased depth of field, and allows higher shutter speeds.

WORK IT, BABY While it's always best to crop in the camera, it's sometimes tough to do so underwater. But not to worry — when you get home you can do some simple tricks with your photo-editing program that will give your images the impact you desire.

That sounds easy enough, but in both cases problems occur. As the film's ISO speed increases, the grain structure increases in order to capture more data. The higher the ISO and the more you enlarge your prints, the more noticeable the grain.

Increasing the ISO speed with a digital camera has a similar effect called digital noise. Not to worry — there are solutions.

1 The first solution is to use a larger underwater flash. Its increased output can reach farther and provide greater depth of field.

2 You can also use higher ISO color print films. Grain structure can be reduced after the film has been processed and images scanned using Digital GEM software from Kodak's Austin Development Center. This software technology reduces the grain while maintaining image sharpness.

3 Digital camera users have a software option from nik multimedia called Dfine. This software works much like Digital GEM, except that it reduces digital camera noise while maintaining a sharp image. The best part is that it can be applied to the overall image or to just a specific color that tends to have increased digital noise.

Digital camera shooters have the advantage of being able to change ISO speeds underwater when the light level changes. They can even modify the ISO from image to image. We highly recommend using the default Auto ISO setting for your first few digital dives. At this setting, the camera is constantly measuring the light levels and adjusting the ISO speed to match. When you are near the surface, the camera might select ISO speeds in the 100-200 range. As you go deeper, the camera will increase the ISO speeds to compensate for the loss of light. If you have the flash turned on, the camera will also use that information when adjusting the ISO speed. When you have mastered Auto, you can try manually modifying the ISO.

CROPPING

It is always best to crop your image in the viewfinder before you press the shutter, but sometimes conditions underwater make that tough to do. Don't despair; you can crop your images after the fact. You'll be surprised to find that cropping can often greatly improve the quality of your images.

When you review your photos, you might discover areas in your image that are distracting. Often this is a white coral area, unwanted air bubbles or even portions of a diver. Cropping can remove unwanted data at the edge of an image or totally change the compositional effect. Sometimes cropping is necessary to zero in on a subject that was beyond the range of your camera lens.

Thanks to technology, cropping a photo is easy to do. Just load your image into a photo editing program and experiment. All the programs have a set of cropping tools so you can make an adjustment and save it as a new image. If you don't like your editing decision, just "Undo" and try again.

You might experiment and find that the image of a long-nose pipefish surrounded in black will improve when the dark area is reduced. The result is a very long photo that better conforms to the shape of a fish.

You might be surprised when you take a second look at your images with cropping in mind. Images you wanted to enter into a photo contest may be given a better chance by merely trimming off unwanted data.

Join Jack & Sue in the field. They have digital adventures planned for April 3-10 and April 10-17 aboard the Nai'a in Fiji. They'll be at Captain Don's in Bonaire May 1-8, and they'll team up with Cathy Church for a digital week in Grand Cayman July 10-18. For more information, go to www.jackandsuedrafahl.com. ◣