Yellow-throated Toucan, Costa Rica.

Super Tele Technique

How to get the most out of your long telephoto for wildlife

Text & Photography By Josh Miller

Long telephoto lenses have always been the mainstay of wildlife photographers, but until recently, good ones have also been way beyond the price range of all but professionals and the most serious enthusiasts. It used to be that you had to have a fast *f*/2.8 or *f*/4 prime lens in the range of 400mm to 600mm to be productive with wildlife, but better-quality telephoto superzooms, as well as the amazing high ISO abilities of modern digital cameras, have put these long focal lengths in the price range of more photographers.

While every wildlife photographer wants to get "closer" shots, many photographers find it harder to make sharp images with long telephoto lenses than they expected. As focal length increases, so does the chance of error. Any imperfections in one's shooting technique are magnified when you reach these extreme focal lengths. But with a few quick tips, you can have that tele lens bringing home the goods with shots you never thought possible.

Solid Support: A Good Tripod And Head Combo

The first most important tool for getting the most from your telephoto is solid camera support. Too often photographers spend all their money buying that new big telephoto and then mount it onto a $50 tripod that isn't designed to support it. As a result, unless they are shooting at shutter speeds that they could have handheld in the first place, they can't get a sharp image out of their new lens. I sometimes hear people complaining that this or that lens isn't sharp, yet often it has nothing to do with the lens but rather what the lens is sitting on top of.

Ideally, your tripod should be designed to hold at least the weight of the camera and lens combination, but the more, the better. A safe rule of thumb is that the tripod and head should hold double the weight of the camera and lens. This gives a margin of error when it's windy and helps reduce the effect of mirror slap with DSLRs. Speaking of tripod heads, if you're still using the one that came on your first tripod, perhaps it's time to upgrade to a rock-solid Arca Swiss-style ballhead like those made by Kirk Enterprises or Really Right Stuff. While expensive, these heads will last a lifetime—I started using mine way back when we all shot film, and it's still going strong.

The ability to compose with a long lens and actually have the lens stay in position after letting go is huge. For truly big telephotos, especially if you want to track moving wildlife, a gimbal head or ballhead adaptor makes life much easier. These heads make

your camera and lens act as if they're weightless, allowing you to leave the head unlocked and track motion with literally the touch of a finger.

Set Fast Shutter Speeds

Whether you're using a tripod or not, having a fast enough shutter speed when using long focal lengths is key. We all know the rule that your shutter speed needs to be faster than your lens focal length, but with big telephotos it's always good to err on the faster side. While we all love the abilities of today's high-megapixel cameras to capture amazing detail, they're also far less forgiving of vibration. When handholding, I always try to maintain a shutter speed well beyond that of my lens length for this reason. Even when using a tripod, I still try to keep super-fast shutter speeds, though as the light fades late in the day, this just isn't possible. With proper technique and shooting multiple frames as backups, I regularly shoot my tripod-mounted 500mm *f*/4 lens down to shutter speeds of around 1/100 sec. (sometimes even slower); some of the frames aren't sharp. The slower the shutter speed, the lower the success rate, so raise your ISO as high as you're willing to go before being forced to increase your exposure times.

Image Stabilization

Modern image stabilization systems work amazingly well, but the dirty secret is that they have fairly limited use. There is some debate that they shouldn't be used at shutter speeds greater than about 1/500 sec. due to potential softening of some images. As far as I can tell, this debate still isn't quite settled and likely is somewhat specific to each lens. The good news is that at those speeds you don't really need to be using it anyway because you likely have a fast enough shutter speed to negate lens vibration.

There's also the debate about using image stabilization on tripod-mounted lenses. While some lenses sense being on a tripod or have a tripod mode, the general rule of thumb is to turn it off unless the tripod head is unlocked and thus you are adding vibration to the system.

As a result, image stabilization use is actually fairly limited. From my personal experience, I really only use it when handholding my lens in less-than-ideal situations. Turns out I don't use it much with my 500mm *f*/4, which is a very large lens and so is usually mounted on a tripod. However, I almost always use image stabilization on my 300mm *f*/2.8, which I handhold in situations where the tripod is too heavy or too much of a hassle.

Trigger Technique

In addition to a sturdy tripod and possibly image stabilization, use good trigger technique with long lenses. It's actually quite similar to firing a rifle, in that your breathing plays a huge role in your steadiness. Even when you're excited about that once-in-a-lifetime shot and breathing fast, it's important to take a moment and collect yourself before shooting. Slow your breathing and make good, solid contact with your camera and lens. Push your eye and forehead tight against the camera body, rest your left hand on top of the lens barrel, applying a steady, moderate downward pressure, and press the trigger button smoothly—don't stab. Using these points of contact as well as slowed and controlled breathing will help to absorb camera vibration sometimes more effectively than even using image stabilization systems.

Mirror Lockup

In situations that are relatively static where you can clamp your tripod down and let go of the camera, using mirror lockup can make a world of difference. By raising the mirror for a few seconds prior to firing the shutter, any vibrations from the mirror movement have time to die down. For extremely long focal lengths in low light when my subject isn't moving, this is my preferred technique. An example would be a perched bird in the distance with my 500mm plus a 2x teleconverter to get to 1000mm. I'll lock up the mirror and hold an off-camera cable release while watching my subject through binoculars, thus giving me a chance to fire the camera at the exact right moment.

Subject Isolation

While we may think about big glass as a way to shoot distant wildlife, the reality is often less about pulling in distant subjects and more about the ability of these lenses to isolate subjects against soft, blurred backgrounds. Most photographers new to long lenses are surprised to find they still need to actually get very close to their subjects to make frame-filling shots. Make sure you check the close focusing distance of that new lens before buying. I often find myself shooting macro or close wildlife images with my 300mm *f*/2.8 or even 500mm *f*/4 because they do such an amazing job of focusing closely and isolating my subject.

When Is It Time For The Big Pro Glass? So now that you have invested in that new super-zoom that takes you all the way out to 600mm, why do some photographers still think it's worth paying five to 10 times more for those huge 500mm and 600mm prime lenses? The answer is all about compromise. While the super-zooms are more affordable, convenient and are actually often quite sharp, they do come at the expense of not isolating subjects as well due to wider apertures and being much slower in terms of light-gathering ability, as well as slower autofocus—remember that the more light that reaches the AF system, the faster it can focus.

From my firsthand experience leading bald eagle photo workshops in Alaska every November, I've seen many direct, real-world comparisons between super-zooms and long prime lenses. During the bright hours of midday, the difference is relatively minor, but it's no surprise that as the light begins to fade, the fast prime users have a big advantage with both shutter speeds as well as AF speeds. While this may seem like a big knock against super-zoom telephotos, the truth is that depending on what subjects you shoot and your budget, these gains may or may not be worth both the added expense and the hassle of dealing with lenses that large. I'm the first to admit I often don't take my 500mm on non-wildlife-specific trips because it's such a pain to travel with.

So before you invest, weigh all your options and really try to nail down your specific goals and intended subjects before buying. For most people and most uses, super-zooms are a far better option due to portability and cost. Don't forget, you can always rent that huge prime lens for your dream trip to Alaska to photograph bald eagles, and by the time you pay for the trip and the rental, you'll still come home with money in the bank. **OP**

Left: Bald eagle sits in the snow during a snowstorm in Haines, Alaska.

Right: Red-legged honeycreeper about to take flight, Costa Rica.

See more of Josh Miller's work at joshmillerphotography.com.