



Swarovski BTX Spotting Scope

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Waterfowl hotspots can be hit or miss here in Wisconsin by the time December rolls around. The Northern shovelers, redheads, ring-necked ducks, and all of their other migratory companions are comfortably settled in down south or well on their way there. There is no shortage of Canada geese however, so when I pulled into Shovelers Sink, a local waterfowl production area managed by the U.S. Fish and Wildlife Service, I still had plenty of subjects to observe for my field test of the new BTX spotting scope module from Swarovski.

What happened next was a bit unsettling. I set up the BTX and found myself totally engrossed in the experience of looking at these geese. I'm generally not one to disparage common birds, but when I got out of my car and saw nothing but a pond full of Canada geese, I figured I'd have to find a cackling goose tucked in there to keep things interesting. What I didn't count on was the pleasure of losing myself in the experience of long distance viewing without

having to keep one eye shut. It's hard to describe the comfort of using a spotting scope with both eyes, but I'm inclined to compare the BTX to a La-Z-Boy recliner for your eyes: Once you immerse yourself in it, it's hard to get out. By the time I pulled my eyes away from the BTX (was that a killdeer I just heard!?), 30 minutes had gone by—looking at geese!

The Concept

Anyone who uses a spotting scope regularly (and many who choose not to use a spotting scope) knows that the biggest downside to having all this magnification at your disposal is hauling around a full-sized tripod for the scope. I won't be holding my breath for a solution to that dilemma anytime soon. Swarovski has addressed the second-biggest drawback of spotting scope use with the BTX eyepiece for their modular spotting scope series.

I can't begin to count the times when I've hunkered down with my scope for an hour or more: observing shorebirds at salt



The author compares an 85mm BTX to an ATX spotting scope.

ponds in Portugal, sea-watching for pelagic birds from shore in San Diego, and studying ducks, grebes, and mergansers closer to home at Horicon Marsh here in Wisconsin. Regardless of where I am or what scope I'm using, eye fatigue sets in after 15 minutes when I'm shutting one eye to look through the other. I regularly need to pull away from the scope and open both eyes for a few minutes. If you're not a dedicated scope user, imagine a birding outing where you left the lens cap over one of your objective lenses of your binocular. One-eyed viewing is simply not comfortable for extended periods. This is the waterfowl watcher's version of "warbler neck." I propose we refer to this scope discomfort as "duck-eye."

Swarovski offers a solution to duck-eye with their new BTX spotting scope module. This replaces the single ocular lens on the back end of a scope with a binocular viewing system, allowing scope users to use both eyes for observation. Swarovski's modular spotting scope system is an ideal platform for this type of innovation. In this system there is no eyepiece as a stand-alone component. Rather, the entire back end of the scope, including the prisms, is removable from the front lenses. The concept is similar to a DSLR camera and its removable lenses. This allows scope users to modify their scope with different components, including objective lenses (65, 85, and 95mm) and ocular configuration (angled or straight).

The BTX scope module, left, next to Swarovski's ATX modular spotting scope.



The BTX is a third option for the ocular component of these modular scopes, and combines the benefits and comfort of a binocular coupled with the power of a spotting scope.

Swarovski's modular scope system lends itself well to this type of innovation because the scope's prism is built into the eyepiece module. Because the BTX has two ocular lenses to look through, it requires a prism for each one. This type of product wouldn't be possible with your typical scope design in which the prism is built into the body rather than the eyepiece. The highest degree of precision is required to pull off such an innovation, and if you've looked through Swarovski binoculars (or even marveled at the price of them), you can tell that Swarovski does precision

well. It's my understanding that this is one of the most complex instruments Swarovski has designed. Despite these complexities, I found the BTX to be delightfully easy to use.

The Execution

Swarovski Optik is known for quality and performance. It has a reputation as a manufacturer of premium optics, and the BTX eyepiece module meets exacting standards of a Swarovski product. The BTX uses the Swarovision optical system, which features a wide field of view, long eye-relief (great for eyeglass wearers), and exceptional edge sharpness, thanks to field-flattening lenses. These aren't new technologies for Swarovski—they have been keystone design

features of EL binoculars and modular scopes for several years. Another design feature of the BTX that is consistent with Swarovski's other sport optics products is that it is waterproof and internally fog-proof.

It also has two binocular-like features that you won't find on any other scope: the ability to adjust the interpupillary distance (IPD) between the two ocular lenses, and a right eye diopter to adjust the unit for differences in acuity between the left and right eye.

Another feature of the BTX that you won't find on any other scope is an adjustable forehead rest. I know, it sounds weird, but trust me on this, it's really useful! First, it acts as a reference to correctly and quickly position both eyes over the center of the ocular lenses and allows you to look right into them without sticking them into your eyes. The second and, in my opinion, most practical benefit of this forehead rest is that it brings additional steadiness to viewing, which is always a plus at high magnification.

The Compromises

It is rare to gain much without making a few sacrifices in optical devices, and as much as I admire Swarovski's innovative designs and engineering, the BTX is no different in this regard. It is heavier than a typical scope of this size, which should come as

no surprise. After all, the number of prisms and ocular lenses is doubled. The BTX weighs a little over 21 ounces more than the standard ATX eyepiece module. That's not insignificant, and some may find that their tripod head isn't robust enough to handle the additional weight. My Gitzo 2180 tripod head, with its built-in counterbalance mechanism, however, worked just fine with the BTX. Your results may vary.

In what I assume was an effort to add some simplicity to the BTX, Swarovski designed it as a fixed magnification eyepiece, so you don't get the versatility in power of a zoom eyepiece. The BTX magnifies 30 times, which is ideal for most bird watching situations. It's been my experience that when using a zoom eyepiece, I spend 90 percent of my time with it set between 30-35x anyway. To build the BTX with a zoom mechanism would likely add to the cost, weight, and complexity. I'll take simple and lighter any day.

Lastly, the BTX may be more challenging to use in shared situations than a scope with a standard, single ocular lens. A group sharing a BTX scope will need to adjust not only the focus for each user, but the IPD between the eyepieces and the diopter as well. This could pose problems if the scope is trained on a specific shorebird within a large flock, for



The BTX eyepiece module from Swarovski combines the comfort of binocular vision with the power of a spotting scope. Features include a forehead rest and sighting device.

instance, and other birders wish to take a look. As soon as someone grabs the scope to adjust the diopter or IPD settings, there is a good chance that doing so will move the scope so that the bird is no longer within the field of view. I haven't used the BTX in a group setting, but I have witnessed many occasions where someone not familiar with the use of standard scopes struggles to get a bird in view with just one eye. The more familiar experience of using two eyes to look through optics could be a benefit for this type of user in a group situation.

The Science Behind the Experience

Despite obvious differences in engineering, Swarovski's single-eyepiece ATX module and the BTX are made of the same top-

quality lens components, and there are no noticeable differences in resolution, color contrast, edge sharpness, or brightness between the two scope systems. The most obvious difference is that the BTX offers a new level of comfort over a traditional scope. Still, it seemed to me like I might actually be seeing more with the BTX. To understand if or how this might be possible, I reached out to retired neurologist and avid birder Terry Fuller to see if there was a scientific explanation as to how my viewing would be enhanced by a device like the BTX.

Terry explained that because the BTX uses a single objective barrel (unlike binoculars), there isn't much to be gained in the way of added depth perception. He noted, however, that each eye sends signals to both hemispheres of our brain. By using two eyes instead of one, we improve our visual acuity and visual performance by increasing the signal to both sides of the brain! Terry explained that "studies looking at binocular vision describe an improvement or decline in visual acuity with binocular gain or loss. Studies in young persons with equal eye acuity suggest a 10 to 15 percent advantage for binocular vision on high luminance, high contrast conditions. This is referred to as binocular summation. Under

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low luminance and contrast scenarios, binocular summation may be as high as 50 percent.” Facial recognition, for instance, has been proven to be enhanced with binocular vision. Does that mean I’ll be able to quickly and easily tell a greater yellowlegs from a lesser yellowlegs with the BTX? Maybe so!

The BTX is a new twist on the existing innovative design of Swarovski’s modular scope system. It’s highly functional and offers bird watchers a real alternative to traditional single-eyepiece spotting scopes. Of course, there are some compromises and sacrifices to be made, both in terms of features (added weight, fixed

magnification) and cost. If you already own a modular scope system from Swarovski, the addition of the BTX eyepiece module will set you back about \$2,700. If you are looking at a complete scope with the BTX, an 85mm unit will run about \$4,400. Is the cure for duck-eye worth it? I have to leave that up to you. What I can tell you is that looking through a scope doesn’t get any more comfortable than this. *✍*

Ben Lizdas has 16 years of experience in the birding optics business and is the ad sales director for Bird Watcher’s Digest. The BTX module is in stock at RedstartBirding.com.



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