

Binos for Birders

By Ken Rosenberg

Thinking of buying a new pair of binoculars? Then read on. Whether you're shopping for your first binoculars or considering taking the big plunge and trading in your old clunkers for some new, top-of-the-line optics, this article will provide the basic information you need to make an informed purchase.

When choosing which binoculars to include in this review, we tried to find a suitable pair for every birder's budget and level of interest. The 25 popular models we looked at (and through) ranged in price from less than \$50 to more than \$1,000.

In our last major binocular review, which appeared in the Autumn 1992 issue of *Living Bird*, we chose the top-rated models in each price group. We now pit these binoculars against an assortment of up-and-coming new competitor. These newcomers include an impressive line of binoculars from Swarovski Optiks that will vie for a share of the big-spender market and a wider choice of affordable binoculars for birders on a budget.

Before you start seriously shopping for binoculars you'll need to make some important decisions. First, how much are you willing to spend on binoculars? Decide how much you can afford and then get the best binoculars you can find in that price range. But remember, binoculars are one of the most important tools of the trade for a birder. You will use them almost every day, often for hours at a time. The quality of your optics will definitely affect your enjoyment and effectiveness as a birder. Top-quality binoculars represent an investment that will last for years. Most high priced binoculars carry lifetime warranties, which means that they may be the only binoculars you will ever need to buy. Inexpensive binoculars may look fine when they're new, but they are often easy to knock out of alignment and they're very susceptible to moisture damage in damp weather.

You must also determine your particular needs in terms of magnification power, field of view, durability, and weight. The features offered by each model often represent tradeoffs between power and field of view, price and durability, or other factors. For example, my 10x binoculars have a slightly narrower field of view than a similar pair of 7x binoculars made by the same manufacturer. The increase in magnification power is worth the loss in field of view to me, but this isn't true for everyone. Some people who do most of their birding up close, searching for warblers and other quick, elusive songbirds in dense woodlands, often rate field of view higher than power in their list of preferences. Other people want to have the brightest image they can get in low-light conditions, and they're willing to pay the extra price and carry the extra weight to get the brightness they're after.

These are all things that you should decide before you make your purchase, but the bottom line should always be optical performance — will the binoculars provide a clear, sharp image of a bird without straining your eyes?

Always Test Before You Buy

Because judging the optical performance of binoculars is so subjective, there's no substitute for trying out binoculars before making a purchase. Remember that the binoculars you choose will become like an extension of your eyes and, just like skis or hiking boots, to be most effective they should fit perfectly. This is especially true if you wear eyeglasses. The right binoculars will guarantee your maximum birding pleasure; the wrong binoculars could at best dampen your enthusiasm for birding and at worst damage your eyes.

To help you decide which binoculars are right for you, we put each model through a series of standard (and some not-so-standard) tests. Our reviewers ranged in experience from casual birders among the Lab staff to members of the Sapsuckers, our crack World Series of Birding team. In addition to the easily measured specifications (weight, interpupillary distance, minimum focus distance, field of view) we attempted to test these binoculars under conditions that often challenge birders. We measured field of view at close range, where the limitations of a narrow field are most apparent.

We decided against putting any of these binoculars through our fogging test. You may remember that in our last binocular roundup we hosed down the binoculars in the garden, then put them in a refrigerator for 30 minutes. This hardly seemed

fair to those binocular manufacturers who had never claimed that their products were water resistant. This time we just point out which models are guaranteed against fogging and which are not.

The results of these and other tests are displayed in the review chart at the end of this article. For a real test, see if you can read the chart from across the room with your binoculars.

For Eyeglass Wearers Only

If you're like me, a birder who must wear eyeglasses in the field, you'll probably find that choosing binoculars requires some special considerations rarely mentioned in reviews of optical products. You may have suffered for years, peering through narrow tunnels and scratching the lenses of your eyeglasses before rubber eyecups became standard issue on most binoculars and scopes. Modern optics have improved immensely, but in terms of "eyeglass-friendliness" the various makes and models of binoculars vary greatly. It is therefore doubly important for bespectacled birders to test binoculars before buying them.

Although all the models we tested have rubber eyecups, not all eyecups proved equal. Apparently some optical manufacturers don't really expect birders to rise the eyecups — either they're flimsy and hard to set, they won't stay folded, or the rainguard won't fit over the eyepieces with the cups folded. The biggest problem for eyeglass wearers, though, is tunnel vision — the limited field of view you experience when you can't get your eye close enough to the ocular lens. I measured the degree of tunnel vision by viewing a tape measure from 15 feet, away in a brightly lit room, with and without my glasses on.

In general, the top-of-the-line binoculars have solved this problem admirably; I could detect virtually no loss of field with my glasses on with any of the expensive models, except the Leica 10x40s, which had a slight tunnel image. Some of the less expensive models also exhibited no tunnel effect — in particular the two Nikon models and the Bausch & Lomb Custom Compacts. In contrast, the Swift Ultra Lites were disappointing in this regard (their only negative feature), and virtually all of the models under \$200 offered a very limited field of view for eyeglass wearers. Keep this in mind when you're choosing binoculars for children who wear eyeglasses. You'll find other comments in the "eyeglass friendliness" column on the binocular review chart.

Top Contenders — A Matter Of Personal Choice

We began by comparing the top models from Bausch & Lomb, Zeiss, Leica, and Swarovski. Each company offers a 10x40 (or 42) and a comparable 7x42 or 3x42 model. All of us who looked through these binoculars agreed on one thing — we would be happy to receive any one of them for a birthday present. Each model offers superb optics, providing a bright, clear, crisp image to the viewer. It's truly a joy to look at a bird through any of these binoculars. As for which model to choose, again that comes down to personal preference. Some of our reviewers liked the wide, solid feel of the Leicas and Swarovskis; others liked the slimmer, lighter feel of the Zeiss and the Bausch & Lomb Elites. Whereas the Zeiss 7x42s proved to be the brightest binoculars we tested in our last review, our hats are off to Swarovski - their newly introduced 10x42s are as bright as the Zeiss 7x42s. The Swarovski models unfortunately have the greatest play in their focus (nearly double that of Zeiss or Leica), which could make it difficult to focus on a bird quickly. The Bausch & Lomb's focus closer than the other models and the Zeiss are the lightest 10x binoculars in their class.

As for 10x versus 7x or 8x, this is also a matter of personal preference. Some people like the lower-powered binoculars -they usually offer a wider field of view and a slightly brighter image than 10x binoculars, and "hand shake" may be less noticeable. But I personally prefer 10x binoculars for all types of birding, distant and close-up, I think that even when watching warblers and sparrows less than 30 feet away, the higher magnification power gives me an edge in making out hard-to-discern field marks. You should try them all out for yourself if you can, however, and find out what works best for you.

In our binocular comparisons, it didn't take long to see that the best binoculars are usually also the most expensive. The Zeiss 10x40s and Leica 10x42s, and the Bausch & Lomb Elite 10x42s and Swarovski 10x42s, are all in the top performance (and price) class. To choose among them, look through each model to see which one is most comfortable for you to use.

Mid-priced Choices That Really Work

For birders who crave superb optics but can't face spending \$1,000 or hauling around a two-pound pair of binoculars, Swarovski has introduced the mid-sized 8x30s. These binoculars are, comparable in nearly every regard to their more expensive cousins, but they weigh significantly, less (only 21 ounces). They seem as bright as the Zeiss 10x40s and their field of view is similar to the Bausch & Lomb Elite 8x42s. Though they're not inexpensive, they are fully waterproof and carry a lifetime warranty.

In a slightly more affordable category, the Swift Ultra Lites are still our binoculars of choice. This year we tested the Ultra Lite 10x42s alongside the original 8x42s. Along with the same light weight, small size, and reasonable price, the 10x42s also provide the same bright, crisp image. My only disappointment is the field of view, which is narrow, especially for eyeglass wearers. We had proclaimed the Ultra Lites to be waterproof in our last review, but since then we've heard of several cases of fogging, including a pair that was ruined by moisture in tropical Costa Rica. We know several other Ultra Lite owners, however, who absolutely love their binoculars.

Nikon provided two binocular models from their Sky and Earth series for our review.— the 8x40 Talons and the 7x50 Wolverines. The Talons are the better of the two for birding (the Wolverines are heavy and bulky and they don't focus close enough for some kinds of birding), but both of them are exceptionally bright and sharp. In fact, these binoculars are the brightest ones we tested. Except for their greater weight, the Talons compared very favorably with the Swift Ultra Lites. And unlike the Swifts, the Nikons showed virtually no loss of field looking through them with my eyeglasses on, though with both Nikon models I had trouble getting a single image at extreme close range.

A few quick words about the Bausch & Lomb Custom Compacts — if you're in the market for lightweight (12.5 ounce), compact binoculars, buy these. They're still the only compact binoculars we've seen that are really suitable for birding. They're tough, optically sharp, and they fit easily in a coat pocket.

Options for the Cash-conscious Birder

In general, opting to spend under \$200 on binoculars means sacrificing some optical quality and durability. If you are a somewhat serious birder and plan to spend more than an hour or two a day looking through inexpensive binoculars, eyestrain could be a severe problem. (I had a splitting headache after spending an afternoon testing these models.) Unfortunately our favorite model in this price range, the Bushnell Birder 7x35, has been discontinued by the manufacturer. What a shame. These binoculars were comparable optically to models costing four times more; they were lightweight, had decent folding eyecups, and focused down to 10 feet — and they cost well under \$100. Bushnell replaced them with the new Birder 8x40, which has a narrower field of view and is less bright and sharp than the original. The Legacy and Natureview models offer a passable image and they're rubber-armored, but the interpupillary distance is too wide for my eyes so I get a double image; also, on the Legacy the rainguard won't fit if the eyecups are folded. Given the differences in price, I'd opt for the less expensive Birder 8x40s and save my money for a better pair in the near future.

Finally at a rock-bottom suggested retail price of \$40, the Bushnell Falcons were a pleasant surprise. (I hardly expected to be able to make out a bird's image for that price.) Optically, the Falcons actually outperformed the new Birder's. The light weight, small interpupillary distance, and "instafocus" mechanism, makes this model the best choice we've seen for children — and just think, you could outfit an entire elementary school class for the price of a single pair of Zeiss 10x40s. But eyeglass wearers beware: you'll experience extreme tunnel vision looking through these binoculars with your glasses on, and the eyecups on the ones I tested kept popping back in my face. Maybe I'm expecting too much from binoculars this inexpensive.

So, whether you're shopping for your first, or your final pair of binoculars, we've selected the best choices available. In most cases the price of the binoculars will be a major deciding factor. But if you're just starting out in birding, remember: it's a myth that top-quality optics are only for serious, experienced birders and that beginners should start with inexpensive binoculars. You don't need to prove your worth as a birder before purchasing a first-rate pair of binoculars, the crisp image, brightness, and viewing comfort provided by good binoculars will only speed up your progress in birding. If you can afford to buy the best binoculars, it's never too early to take the plunge. But if you can't justify dropping a small fortune on binoculars anytime soon, don't— feel bad — reading this review and shopping carefully will help you get the best binoculars you can afford.

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Over \$800

Price range and model	Bausch & Lomb Elite 10x42	Bausch & Lomb Elite 8x42	Leica ULTRA 10x42 BA	Leica ULTRA 8x42 BA	Swarovski SLC 10 x42	Swarovski SLC 7x42	Zeiss 10x40 B/GAT	Zeiss 7x42 B/GAT
Suggested retail price *	\$1,800	\$1,700	\$1,195	\$1,145	\$994	\$943	\$1,360	\$1,252
Prism	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof
Armor	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Interpupillary Distance (inches)	2 3/16 - 2 7/8	2 3/16 - 2 7/8	2 3/16 - 2 7/8	2 3/16 - 2 7/8	2 3/16 - 3 1/16	2 3/16 - 3 1/16	2 3/16 - 3	2 1/4 - 2 15/16
Good for eyeglasses **	1	1	2	2	1	1	2	1
Weight (ounces)	28.1	29.1	32	32	30	30	26.4	28.2
Play of focus	400°	400°	330°	330°	630°	630°	330°	330°
Minimum focus distance	11'	10' 6"	13' 6"	12'	14' 6"	13'	15'	11'
Field of view at 30 feet ***	34"	43"	28"	42"	32"	48"	29"	51"
Brightness #	90	95	90	95	95	100	90	95
Sharpness	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Center-to-edge resolution	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Rainguard	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Waterproof	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

\$500 - \$800

Price range and model	Swift Audubon 7x35 HFC	Swarovski SLC WB 8x30	Bausch & Lomb Custom 10x40
Suggested retail price *	\$675	\$665	\$550
Prism	Roof	Roof	Porro
Armor	Yes	Yes	Yes
Interpupillary Distance (inches)	2 5/16 - 3 1/16	2 3/16 - 3	2 5/16 - 2 7/8
Good for eyeglassesB	4	2	2
Weight (ounces)	21.7	21	30
Play of focus	455°	405°	470°
Minimum focus distance	9'	15'	12'
Field of view at 30 feetC	47"	43"	28"
BrightnessD	80	90	70
Sharpness	Very good	Excellent	Excellent
Center-to-edge resolution	Very good	Very good	Very good
Rainguard	No	Yes	Yes
Waterproof	Yes	Yes	No

\$200 - \$500

Price range and model	Bausch & Lomb Custom 8x36	B & L Custom Compact 7x26	Kowa BAK 4 Prism 10x40	Nikon 8x40 Talon	Nikon 7x50 Wolverine	Swift Audubon 8.5x44 BWCF	Swift Ultra Lite 10x42 ZWCF	Swift Ultra Lite 8x42 ZWCF
Suggested retail price *	\$475	\$450	\$325	\$238	\$261	\$495	\$430	\$410
Prism	Porro	Rev. Porro	Porro	Porro	Porro	Porro	Porro	Porro
Armor	No	Partial	Yes	Yes	Yes	No	Yes	Yes
Interpupillary Distance (inches)	2 5/16 - 2 7/8	2 1/4 - 3 1/8	2 3/16 - 2 3/4	2 3/16 - 2 7/8	2 3/16 - 2 7/8	2 3/16 - 2 7/8	2 - 3	2 - 3
Good for eyeglasses **	2	2	2	1	1	3	4	2
Weight (ounces)	22.2	12.5	26	28	35	29	21	21
Play of focus	405°	370°	240°	170°	185°	455°	405°	405°
Minimum focus distance	6' 8"	7' 6"	15' 6"	13'	18'	15' 6"	14'	13'
Field of view at 30 feet ***	38"	45"	26"	38"	37"	42"	32"	35"
Brightness #	85	90	85	100	100	90	90	95
Sharpness	Excellent	Very good	Good	Very good	Very good	Very good	Very good	Excellent
Center-to-edge resolution	Good	Good	Good	Very good	Good	Very good	Good	Good
Rainguard	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Waterproof	No	No	No	No	No	No	No	No

\$100 - \$200

Price range and model	Bausch & Lomb Legacy 8x40	Bausch & Lomb Legacy 7x35	Bushnell Naturevie w 10x42	Bushnell Naturevie w 8x42
Suggested retail price *	\$177	\$165	\$191	\$159
Prism	Porro	Porro	Porro	Porro
Armor	Yes	Yes	Yes	Yes
Interpupillary Distance (inches)	2 5/16 - 2 7/8	2 5/16 - 2 7/8	2 5/16 - 2 7/8	2 5/16 - 2 7/8
Good for eyeglasses **	2	2	3	2
Weight (ounces)	26.8	24.6	24	25.4
Play of focus	270°	270°	350°	350°
Minimum focus distance	13'	9'	11' 8"	9'
Field of view at 30 feet ***	32"	35"	28"	38"
Brightness #	80	85	60	80
Sharpness	Fair	Good	Fair	Good
Center-to-edge resolution	Fair	Fair	Poor	Poor
Rainguard	Yes ##	Yes##	Yes	Yes
Waterproof	No	No	No	No

Under \$100

Price range and model	Bushnell Birder 8x40	Bushnell Falcon 7x35
Suggested retail price ^A	\$70	\$43
Prism	Porro	Porro
Armor	No	No
Interpupillary Distance (inches)	2 1/4 - 2 15/16	2 1/8 - 2 15/16
Good for eyeglasses ^B	4	3
Weight (ounces)	19.6	21
Play of focus	500°	Insta-focus
Minimum focus distance	11' 8"	10'
Field of view at 30 feet ^C	34"	31"
Brightness ^D	70	70
Sharpness	Fair	Good
Center-to-edge resolution	Poor	Good
Rainguard	Yes	Yes
Waterproof	No	No

* = Suggested retail prices should only be used for comparison; actual retail prices are often substantially less.

** = Based on percentage of reduction in field of view with eyeglasses:

1 = no loss, 2 = < 10% loss, 3 = 10-20% loss, 4 = > 20% loss.

*** = Actual field of view will vary among observers.

= A comparative scale: 100 = brightest model tested.

= Rainguard doesn't fit with eyecups folded.