

# Binoculars for Beginning Birders

by Harold Ward

## Introduction

So, you're beginning to do bird watching? Among your first few and most important decisions is what binoculars are best for you. A pair of binoculars should be comfortable, permit you a quick, high fidelity look at the birds and other wildlife you encounter and fit your budget. The terminology of binoculars can be a little daunting but it's important to understanding what to look for. Binoculars are really just paired telescopes with:

- two large lenses which gather light from the object you wish to see,
- some arrangement of intermediate prisms to make the binoculars smaller than a telescope and
- eyepieces (smaller lenses you look through when using the binoculars).

Binoculars come in many shapes and sizes and for a large number of purposes. They permit you to see in stereo and to magnify what you see making small things large and distant things appear closer. The following is a list of many of the considerations for binoculars you might want to use for birding and other nature watching:

## Weight

The weight of the binoculars you choose is very important since you may want to be able to continuously use your binoculars for hours. Heavy binoculars will tend to remind you of their weight steadily by the strap pinch on the back of your neck. This can be mitigated a little by a wider, more padded binocular strap or by getting a shoulder strap arrangement. The latter are more nuisance than a neck strap and, in either case, you're still carrying around some heavy binoculars. Remember, even light binoculars feel heavy by the end of a long day.

## Magnification

Usually one of the first specifications for binoculars is its power or magnification. For a pair of 7X35 binoculars, the image you see through the binoculars is seven times larger than the image you see directly from the same vantage point. For most people, your eyes can compensate for the shakiness of your hands when looking through up to seven or eight power binoculars. Beyond that power range, the image is shaky enough that even though you might be getting a larger image of the object of interest, you may not be able to use of all of the visual information you get. Also, binoculars less than seven power don't magnify the image enough to be able to easily distinguish many of the features of the smaller, busier birds.

## Brightness

The brightness of a pair of binoculars is mostly a function of the magnification and the amount of light gathered through the objective lenses in your binoculars. The objective lens diameter, 35 millimeters in the 7X35 example above, divided by the magnification gives a useful ratio (i. e. 5). A ratio of 5 (assuming you have decently clear optics) gives you a reasonably bright image through your binoculars approximating for most people the brightness you see without the binoculars. A larger ratio here is usually better so 7X42 binoculars are for comparable optics brighter than 7X35 and this means that you can use your binoculars earlier in the morning, later in the evening and when the bird you're watching is in deep shade. The quality of a pair of binoculars' lenses and prisms and their coatings also affect brightness.

## Color

"Birding Chic" notwithstanding, the color of the outside of the binoculars is unimportant but the colors coming through your binoculars should be unchanged. For birding and other nature watching, you don't want any color filters in your binoculars. Colored lenses make it harder to figure out what colors you're seeing in the wildlife you're watching and that makes identification more difficult. Poorly manufactured optics may also add a rainbow fringe to the image you see or give the image a dim or milky appearance.

## Field of View

The field of view is often included as a binocular specification. It is usually given as for example 300 feet at 1000 yards or 100 meters at 1000 meters and is actually a measure of the angular width of the cone your binoculars allow you to view. Note that eyeglass wearers may be penalized here if their glasses keep their eyes too far away from their binoculars' eyepieces. That can mean that you may not be able to get a look at a bird you've spotted quickly or be as easily able to follow a flying bird or flock with your binoculars. Binoculars with larger magnification also usually have a smaller field of view or bigger objective lenses and other optics (making them heavier).

## Fast Focus

Experienced birders may not need a fast focus but if you're just starting out, it comes in very, very handy. Many of the niftiest birds, warblers for example, are small and very active...they don't usually stay in any one place for longer than a second if that. If you manage to get a peek at one even as an experienced birder, you need to count yourself lucky. Once you've got pointing your binoculars down pretty well, fast focus permits you to see one of the greater tiny spectacles in nature.

## Near Focus

Most people think of binoculars as primarily useful for seeing things that are far away. However, some of the smaller birds (warblers, vireos and hummingbirds for example) operate on a time scale that probably gives them the impression that we humans are just fairly fast moving trees. As a result, you can often approach them to within a few yards. Although that is a good thing, your binoculars might not be able to focus that near in. So make sure your binoculars have a decent near focus. Eight or nine feet is excellent for this purpose. A twenty foot near focus is adequate for most birding.

## Center focus and Diopter Adjustment

Even minimally adequate binoculars have a single dial, which focuses both eyepieces simultaneously. This is a very important feature for birding. To make this feature effective, such binoculars permit (usually the right eyepiece) to be adjusted so that your left eye and right eye stay in focus as you adjust the center focusing dial. Be sure to get familiar with the procedure to adjust your binoculars to your eyes and eyeglasses if you wear them and remember your diopter setting so you can quickly reset it if/when you let someone else use your binoculars.

## Spotting/Viewing Mechanics

Try to avoid spotting birds with you glasses on and then trying to view them through binoculars without your glasses. The extra time it takes to do this will cause you to miss a lot. It's much better to pick out your binoculars so they work with your eyeglasses or wear contact lenses. That way the process of going from spotting to viewing with binoculars is quick and consistent and you don't have to worry about dropping your glasses or your binoculars.

## Price

You can usually tell whether an author is selling binoculars by the price of the least expensive ones recommended. Although there is a relationship between the overall performance of a pair of binoculars and their price, consider your skills at binocular use and handling. It is possible to buy binoculars costing more than most people pay for a car or even a house. Until you have become proficient using and caring for a pair of binoculars, remember a less expensive pair of binoculars will provide very good service. Also with decent but low cost binoculars, it won't hurt your feelings nearly as much the first time you drop them on hard pavement or into a puddle. It is possible obtain a good pair of binoculars for moderate price (usually \$50 or less) and, if you don't manage to drop them, otherwise destroy them or lose them, you can always keep them around for a friend to borrow when you go out for bird walks.

## The Learning Curve

Bear in mind where you are on the learning curve.

Unless you have already extensively used binoculars for some other purpose, you will need to acquire the skill of pointing your binoculars at something to get a better look at it. You should also practice following moving objects with your binoculars. With practice not only will you be able to more quickly get to see birds you've spotted through your binoculars, you will also begin to be able to make better use of the observations you make (collect more and finer details, etc.).

As with many personal possessions, your needs and desires will differ from the next person's. They may also vary as you gain more experience and as the kind of birding you do changes. Try out a variety of binoculars and see for yourself what works best for you. The best trials are actually using a candidate pair of binoculars for some hours of birding.

Practice using your binoculars to view birds in your back yard until you can quickly view a spotted bird. You should also "warm up" each time you get started birding by spotting a few points around you near and far and quickly viewing them with your binoculars. That way when you first spot an interesting bird you won't miss it because it's the first thing you tried to view that morning. If you have good stereo vision, you should be able to get a much better view of "the bird in the bush" than with your unaided eyes but this also requires some practice focusing at the right depth in the shrubbery.

Bring your binoculars along even when you're just going to be listening for owls; binoculars are an invaluable tool for stargazing and planet watching. You can even practice following satellites.

## What to avoid

Considering all of the suggested Do's mentioned above, it's worthwhile to point out some of the Don'ts. I'm pleased to say that, although it did take me over a year to decide that I even needed binoculars, I haven't personally made all of the following mistakes.

- Doublers or Zoom Binoculars These are binoculars with a zoom feature which permits you to change the magnification often from around seven to fifteen or twenty. The problem with them is that they are usually more expensive than fixed magnification binoculars, often heavier, way too dim and shaky at the higher magnifications and often have "rainbow" fringes. A better strategy is to get a decent pair of fixed magnification binoculars and save the money you didn't spend on doublers for a nice telescope and tripod.
- Opera glasses These binoculars chief use is watching a well lit stage performance or sporting event. They usually are too low magnification. Although they're very attractive from the weight perspective, they're usually way too dim for birding and other nature watching.
- Fixed focus binoculars These binoculars eliminate focusing as a problem by completely eliminating it as an option. This means that they will have a very large near focus and you will need to view all your close encounters with interesting wildlife without them.
- Colored lenses These are often sold to hunters and some military surveillance optics have the ability to select colored lenses to be better able to look for illegal immigrants, drug smugglers, terrorists, etc. They filter out most colors and make colorful birds hard to recognize.
- Rainbow fringes Low quality optics often give the object of interest a rainbow colored fringe.
- Misaligned binoculars You may be briefly able to adapt your vision to a pair of binoculars which don't point to the same spot but don't do it. After a few minutes of birding, it becomes very uncomfortable and may lead to headaches, nausea, etc.
- Binoculars you can't quite focus Extremely low cost binoculars are usually so inexpensive because they aren't worth bothering with. If you can't immediately adjust a pair of binoculars for your eyes including eyeglasses if you normally wear them, don't buy them.
- Separate focus binoculars Even some name brand binoculars used to be manufactured with a focus dial on each eyepiece. This may have been adequate for fire spotting or other purposes but it's unsuitable for birding...by the time you finish getting the spot you want to look at in focus, the bird is likely to have flown.