

Whether you're scouting whitetails, spying on waterfowl or just watching wildlife, a good set of binoculars lets the eyes have it.



Binoculars can provide clear closeups of nature, but the wide range of sizes and styles can be confusing.

Binoculars Basics

Story By Carol McFeeters Thompson
Photos By Adele Hodde

Although no special equipment beyond eyes, ears and patience is required to spot birds or other wildlife in a backyard or park, many observers find themselves wishing for a closer look than is possible with the naked eye.

Binoculars allow for viewing distant subjects, magnifying the image to reveal details not otherwise visible.

With a good pair of binoculars a "little brown bird" flitting from branch to branch becomes a ruby-crowned kinglet with a white eye ring and wing bars. Binoculars allow observers to view not only field marks, but to gain intimate details of an animal's behavior, such as courtship displays or care of nestlings, at a respectful distance.

Shopping for a pair of binoculars can be a confusing and intimidating experience. Confronted with a bewildering

jumble of numbers, symbols and technical terms, many beginners rely on brand name recognition or the advice of an inexperienced salesperson, and often are disappointed with their first purchase.

With a little information, first-time mistakes can be avoided and the first purchase successful. Factors to consider when choosing binoculars include magnification, brightness, cost and

Width of object lens/magnification = best sharpness and clarity.

comfort. A good pair of binoculars is a compromise among these elements.

Binoculars are usually first described with a pair of numbers, such as “7x35.” The first number refers to magnification, meaning 7x35 binoculars magnify subjects seven times larger than it appears to the naked eye. Most binoculars magnify images between six and 10 times.

Often first-time purchasers are tempted to choose a high level of magnification. After all, 10x magnification—where a subject 100 feet away appears to be 10 feet away—brings a subject 30 percent closer than 7x magnification. However, in addition to magnifying the subject, 10x magnification also magnifies movement of the hands and arms due to wind, fatigue or breathing, resulting in loss of brightness and clarity of the image. Purchasers must find the balance between magnification and image steadiness that meets their personal needs and preferences. When details are important, many people decide that the higher resolution of a lower magnification is more valuable.



The second number refers to the width, in millimeters, of the objective lens—the lens farthest from the viewer. Larger objective lenses allow more light to enter the binocular, creating a brighter image. This is especially important in early morning or late evening hours, the time when birds and other wildlife often are most active. Again there is a trade-off because larger lenses are heavier. Lightweight binoculars are more pleasant to use and carry for

extended periods. A good rule of thumb is that the width of the objective lens divided by the magnification should be about five for best sharpness and clarity.

The most common binoculars are 7x35, 8x42 and 10x50. As the magnification and objective lens size increase, the binoculars become larger and heavier. Many wildlife watchers find 7x35 binoculars to be the best all-around choice, balancing magnification, brightness, stability and weight.

In binoculars, you generally “get what you pay for” and most experts agree that buyers should purchase the highest quality they can afford. Price depends more on quality of the optics than on magnification. The more you pay, the higher the resolution, the finer the detail and the greater the enjoyment.

A modest pair of binoculars will cost about \$100 and be adequate for occasional use for limited periods of time. A mid-range price would be \$150 to \$350 and would be preferred by those using their optics regularly and for extended periods. High-end binoculars could cost as much as \$1,000.

As scores of brands and models are available in mid-price ranges, gathering information before making a purchase is advised. Ask for advice from a local birding

club or nature center, or from other wildlife watchers, on the brand and model they recommend and what they like and dislike about their choice.

Comfort is an important consideration when buying binoculars and there is no substitute for trying them out before buying them. To avoid eye strain and headache, select a pair that provides a bright and clear image all the way to the edges. The user’s index finger should rest comfortably on the focus bar and it should be easy to focus. To avoid muscle fatigue that can spoil an outing, binoculars should not be too heavy to hold steady. The user’s arms should not tire after holding them for a few minutes.

When purchasing binoculars, consider magnification, brightness, cost and comfort. Balance magnification against stability and available light against weight to find a compromise that meets your needs and preferences. Ask questions and gather as much information as you can. Buy the best pair you can afford and always try before you buy. With a little preparation, you can buy the right pair of binoculars the first time. 

Carol McFeeters Thompson is the site interpreter at Weldon Springs State Recreational Area, Clinton.



According to the U.S. Fish and Wildlife Service, birding is the No. 1 one sport in America with 51.3 million participants.