For most of the birds visiting the feeders in your backyard, you will have little or no trouble seeing them well enough to identify them. But if your interest in the birds grows and you start to venture away from your backyard, you will find that several pieces of equipment may be quite helpful.

**Binoculars**
A good pair of binoculars is essential! Binoculars are classified by power of magnification and size of the objective lens (the big lens). Binoculars that are 7 x 35 will have a magnification power of 7 and an objective lens size of 35 millimeters (mm). The larger the objective lens the more the light gathering ability. A ratio of 1 to 5 is preferable (for every 1 power of magnification the objective lens should be 5 mm.) 7 x 35's up to 10 x 50's are good for all around bird watching. Wide angle binoculars tend to be preferable since it makes it easier to find the bird.

Find a pair that is comfortable for you. Look at an object, through the binoculars. Does it quickly and easily come into focus or is it a strain on your eyes? If it is a strain find another pair. You can find good quality binoculars for occasional bird watching for around $75.00.

If you are going to be serious about your birdwatching, invest in a good pair of binoculars. Think nothing of spending $200 to $300. You can go as high as $2,000. If you are going to be spending more than $300, you had better plan to be using them every day to justify it!

Is the price a good indicator of quality? Yes and no. The optical quality in a pair of $100 binoculars may be just as good as the optical quality in a pair of $400 binoculars. Where the difference is most likely to be seen is in the durability. Because binoculars depend on a series of lens and prisms, it is important that everything remain properly aligned. If the prisms get knocked out of alignment, you will often see double images or you won't be able to get both eyes in focus at the same time. More expensive binoculars are usually more resistant to being knocked out of alignment from drops and bumps. In more expensive binoculars the exterior finish is often more durable and frequently weatherized.

**Spotting Scopes**
Once you cross the threshold from occasional bird watching to a little more serious bird watching, a spotting scope is often the next desired piece of equipment. A spotting scope allows birdwatchers to "pull in" those far off waterfowl or other perched birds.

Many spotting scopes offer a zoom capability which starts at 10 - 15 power and goes up to 45 - 60 power. Keep in mind that you will need to spend a more money for one in excess of 40 power that will deliver a high-quality image, especially if you are looking across a distance in excess of 1/4 mile or less in hot weather.

Many of the better quality spotting scopes also offer interchangeable eyepieces which allow you to take a zoom eyepiece out and replace it with a wide angle eyepiece.

As with binoculars, spotting scopes also are classified by the size of the objective lens. The larger the objective lens, the more light it lets in' the brighter the image in the eyepiece; and the more
usable the scope is under limited light conditions. Size again has its cost and the larger the objective lens the more you will pay. Currently the minimum size objective lens is considered to be 60mm and many of the better models are in the 77mm to 82mm size range. Suitable spotting scopes for bird watching will start around $200; prices range up to $4,000.

Since a spotting scope operates at such a higher magnification than binoculars you also will need a tripod or a vehicle window mount. A tripod should be sturdy enough to hold your scope securely even in windy conditions. The controls should be easy to use, even while wearing gloves and offer smooth operation. It should also be fairly easy to put your scope on the tripod. Many tripods sold for camera and videorecorder use are not sturdy enough for spotting scope use. A good tripod will cost anywhere from $75 to $600.

If most of your birding is from your vehicle, then the vehicle window mount may be a better starting point. A good window mount will cost about $60.

**Bird Watching by Sound**

There are available excellent quality recordings of bird songs and calls (see Backyard Birding Guide #3). These can be a valuable identification aid as well as helping you to learn bird songs in advance. It is a good idea to have a portable tape recorder to take the tapes with you. If you can compare songs on the spot, you will have a better chance than trying to remember an hour later what that bird sounded like!

As new technology moves from the lab into our daily lives, birdwatchers are finding ways to use this new technology in the field. Portable CD players and now MP3 players are being loaded with multiple versions of bird songs allowing the birder to have a virtual library of recorded bird songs with them in the field.

A new twist is a device known as the Birdsong Identiflyer™. This handheld device incorporates some of the new audio technology hardwired onto plastic cards with pictures of bird next to a button. Pop one of these cards with ten bird songs on it into the handy playback unit and you can instantly listen to those calls with a push of a button. For more information on this device you can go to the company’s web site: http://www.identiflyer.com/.

Care needs to be taken with portable playback units in the field. Excessive playing of a bird's song may cause breeding birds to abandon their nests.

For more information contact:
Chuck Otte
Geary County Extension Agent
PO Box 28
Junction City, Kansas 66441
Telephone: 785-238-4161
E-mail: cotte@oznet.ksu.edu