Introduction
There are over 50 million birders in the United States, thousands of whom have been doing it most of their lives. So there is a wealth of experience out there, and this guide tries to tap that experience to help those just getting started.

Equipment
The two most important birding items are a pair of binoculars to help you see the birds and a field guide to help you identify them (see the next section). Binoculars ("bins" for short) are the basic piece of birding equipment. There are hundreds of choices by many manufacturers, but a good 7.5 or 8-power pair (i.e., magnifies 7.5 or 8 times) is the most common choice. Some birders prefer 10-power, though these are somewhat heavier to carry around and can magnify shaking from unsteady hands. Binoculars range in price from $100 all the way to $2,000 or more. There can be a world of difference in the clarity of the image in more expensive models. In general, the quality of the optics increases with price. A good pair will increase your birding enjoyment so get the best that you can afford. Many come with a padded cushion where the strap rests on the back of the neck to relieve the feeling of the strap cutting into the neck; special harnesses are also available to relieve the weight of the bins to accomplish the same purpose. Before purchasing a pair of bins, you should check out various models: either visit a birding or optics store or go on a birding field trip and ask to use various models used by other participants — most will be very glad to help you.

Clothing should be appropriate to the weather. A hat is generally essential — especially during sunny weather. Sturdy footwear such as sneakers, hiking boots, and (in winter) insulated boots are recommended — waterproof if possible. If birding in marshy areas or after heavy snow melt or rains, knee-high waterproof boots are advisable. Don't forget a raincoat when precipitation is expected.

Sunburn protection and tick and bug repellent are necessary during warmer months, when many hours may be spent outdoors. Long pants and sleeves are especially helpful in this regard — the pants can be tucked in your socks to prevent ticks from getting onto your skin.

When birding or hiking for hours, especially on hot summer days, carry water and snacks. A light pack or bag to carry food and other supplies is very helpful. There are even special vests with many pockets, if you want to go that route.

When you get some experience, you may want to invest in a spotting scope and tripod, which can increase your magnification level to up to 60 power, allowing you to see birds a mile or more away on the ocean or across fields and woods. However, at higher powers heat shimmer can detract from the clarity of the image and less light is gathered, and lugging 8-12 pounds around can be taxing. The best thing to do is look through the scopes of others on field trips to get an idea of what scopes can do. As with binoculars, top-of-the-line scope/tripod combinations run from $2,000 to $3,000, but you can spend just a few hundred dollars as well. "You get what you pay for" is a phrase that tends to hold true for optics.
A notebook and a couple of pens should be carried to record your observations. In this electronic age, cell phones and portable internet access have become commonplace among birders to keep in touch while in the field. Be aware, however, that many birding locations — especially in northern New Hampshire — are remote and cell phone service may not be available.

Field Guides
A basic field guide is the second essential item for any birder to have. Although many birds look the same all year, some birds are more brightly colored during spring and summer, and some species go through a series of plumage changes on the way to adulthood that may last up to three or four years for gulls and eagles. A good field guide that illustrates these changes is a must. For some species, only one of the plumages illustrated may ever be seen in New Hampshire due to the bird’s migration cycle.

There are guides covering the whole country as well as guides covering either the eastern U.S. or the western U.S. The most commonly used general guides are:

- A Field Guide to the Birds of Eastern and Central North America (Peterson, also a Western edition)
- Sibley Guide to Birds (also Eastern and Western editions)
- Kaufman Field Guide to Birds of North America
- Stokes Field Guide to Birds (Eastern and Western editions)
- Golden Guide to Field Identification — Birds of North America
- National Geographic Field Guide to the Birds of North America
- National Audubon Society Field Guide to North America Birds (Eastern and Western editions)

Once you really get hooked, there are specialized guides to gulls, sparrows, warblers, shorebirds, and other groups of birds, as well as to other countries for those who travel overseas. There is also where-to-bird guides to many states.

In addition to the printed field guides, there are audio guides to bird songs, with Peterson and Stokes being the most common. These can be very helpful in learning the songs of various birds, or for checking sounds you hear while in the field. They come in compact discs, tapes, and other media, and, of course, require a suitable player. There are also all-in-one units that combine audio and visual identification.

Then there are the various guides on the Internet. These combine both visual and audio identifications. Among the most used are the Cornell Laboratory of Ornithology All About Birds web site, http://www.birds.cornell.edu/AllAboutBirds, and WhatBird, http://www.whatbird.com/.

It's also important to know what birds are expected in your area and when. A Checklist of the Birds of New Hampshire, available from N.H. Audubon, provides this information in the form of occurrence bar graphs and is indispensable for beginning and advanced birders.

When to Bird
You're not going to like this if you're a night person, but the best time to bird is generally in the early morning. With daybreak, most birds become active in their never-ending search for food. During spring
and summer, they are also very vocal, as the males are singing to attract mates and defend territories. By late morning and during much of the afternoon, activity slows down, especially on hot days. Often late afternoon is another period of activity before birds bed down for the night.

There are exceptions to this general rule, however. Certain birds such as owls and Whip-poor-wills are nocturnal, and are seldom seen, but can be heard at night. Shorebirds, gulls, and terns can usually be seen all day long, though they are often forced to move around in response to the ocean tides. During the May through August nesting period, parents are constantly foraging to feed their growing broods of nestlings, and the males, at least, are often quite visible.

Periods of migration produce the largest variety of birds. In fact, many species can only be seen during migration since they winter in the southern U.S. or Latin America and breed in Canada or Alaska. Spring migration begins about mid-March and ends in early June. Fall migration can begin as early as late July for Arctic shorebirds and lasts through November. But there is a catch: many species migrate during a rather narrow window of time — e.g., Mourning Warbler seldom arrives before June 1, and a few ducks such as Canvassbacks have already gone north by mid-April. There are even a few species such as Connecticut Warbler (if you’re lucky enough to see one at all), that can only be seen in the fall, since Spring migration is normally far to the west of the state. Many species, primarily songbirds, slip through largely undetected, since they migrate at night.

Certain other species can be seen only in winter, as they breed in the Arctic or the boreal forests of Canada and go south only when conditions are too harsh or the food supply too low to survive. These include owls such as the Great Gray and Snowy Owls, finches such as Pine Grosbeaks and White-winged Crossbills, and Bohemian Waxwings.

One important thing to remember is that many species go through one or more changes in plumage during the course of the year — breeding and non-breeding plumages (though professional ornithologists and very serious birders use more technical terms). This often affects only male birds, whose spring and summer plumages may be brightly colored to attract females, while the female may be rather subtly colored to help protect them while on the nest. Once the nesting period is over, however, males molt their feathers into duller plumages and may become indistinguishable from the females.

However, no matter when you bird, you will generally find a decent variety of birds.

Where to Bird
The key word here is "habitat." Although some birds such as American Robins can be found almost anywhere, most birds prefer certain types of habitat and can normally be found only there.

Ducks, loons, and grebes are almost totally aquatic birds and are found on fresh, or in winter, salt water, coming ashore only to nest or rest briefly. Meadowlarks, Bobolinks, Killdeers, and some sparrows are grassland birds. Many warblers, tanagers, and orioles spend almost their whole lives in trees — often way up in the canopy. Many other species of small birds are what are called "edge" birds, living on the edges of the forest, in small shrubs, and field edges — think sparrows, bluebirds, some warblers, and
buntings. A number of birds called "pelagic" species are normally found only at sea--often many miles offshore--including shearwaters, puffins, murres, and phalaropes. Swallows and swifts are most often seen flying, as they feed on the wing. Raptors such as hawks, eagles, and falcons are more universal, as they may need to range widely to find enough food.

In addition to general habitat, there is geography to consider. Some birds are found only in the White Mountains or boreal forest areas of northern New Hampshire. Bicknell's Thrush, for example, is almost never found below 4,000 feet in elevation. Boreal Chickadee and Spruce Grouse are two other examples of northern birds. Conversely, many species are limited to southern New Hampshire's marshes, woods, fields, and Seacoast.

Also remember that migration is a factor. All bets can be off when birds are passing through the state and must seek food and shelter wherever available. Shorebirds, in particular, can often be found far inland in partially flooded fields.

For up-to-date information on what birds are being seen and where, check the free NH.Birds listserv at the Birdingonthe.net web site, at http://www.birdingonthe.net/mailinglists/NHBD.html. (Links for all states and Canadian provinces are at that site.) Subscription information for NH.Birds is at http://pubpages.unh.edu/~djb1/nh.birds.html.

How to Bird

The number one rule is not to harm or distress the birds. That seems obvious, but you'd be surprised how often people too eager to see a bird get too close, make too much noise, or otherwise disturb birds. Remember, birds have two main goals in life — get enough to eat and reproduce. Too much disturbance can affect one or both of these goals.

A Birder's Code of Ethics has been developed by the American Birding Association, which can be viewed at the following link: http://www.americanbirding.org/abaethics.htm. Please abide by it!

Common sense is the byword for birding. Be quiet. Move slowly when close to birds, since they may spook and fly away if they sense quick movement nearby. Dress in unobtrusive colors, if possible, with one exception: if you are birding during fall hunting season, protect yourself by wearing a brightly colored hat or vest. Watch for movement and practice training your binoculars on a bird and following it as it moves through the trees. Listen for bird songs as they can help you locate the birds that are around.

Many birders use a technique called "pishing" to lure small birds within range or into the open where they can be better seen. Basically, this consists of pursing your lips and saying "pish-pish-pish-pish" — or similar sounds—in quick succession a number of times. Some birds such as chickadees respond readily to pishing, while others ignore it. In fact, pay attention to chickadees: many other small birds associate with them.

Pay attention to loud commotions of birds. Some species such as chickadees, Blue Jays, and crows engage in "mobbing" — making lots of noise and harassing intruders such as hawks or hidden birds such as owls.
Group Birding
Many birders prefer to bird alone at their own schedule without the distraction of other birders. However, rewarding experiences and greater variety can sometimes be had in organized field trips or other group birding outings. The benefits come from the expertise of the leaders and other more experienced birders in the group, who can often locate birds that you might not be able to locate on your own and share their knowledge and experience with others. There is also a social factor to consider, and many birders develop friendships from group outings. The main drawback to organized groups is that you are limited to the itinerary and schedule of the group, although some groups are somewhat flexible when word of rare birds nearby is received via cellphone or the internet.

Field trips are regularly run by New Hampshire Audubon and its various chapters. See http://www.nhaudubon.org for schedules and links to its local chapters. Other organizations, such as the Friends of Ponemah Bog, town conservation commissions, and The Nature Conservancy offer field trips too — often these will be in a series such as every Wednesday during May. These are publicized in various ways, from web sites to local newspapers to postings on NH.Birds.

Sharing Your Experiences and Data
Many birders record their sightings — both visual and audio — on daily checklists, or just in a notebook for future reference. Checklists specific to New Hampshire are available from N.H. Audubon. Nowadays, many birders computerize their sightings by using Excel spreadsheets. It’s a good way to keep your Life List — the list of all species you have seen and heard during your birding experiences.

The next step is to share your sightings with others — especially the rarer species that most birders crave to see because they are rare in New Hampshire. Submitting your records to New Hampshire Bird Records can be done in a number of formats — see the web site, http://www.nhbirdrecords.org, for details. For breaking news, consider using the NH.Birds listserv, at nh.birds@lists.unh.edu. On the national level, you can submit your data to eBird, http://www.ebird.org, which also has a Life List feature to allow you to keep your records online.

There are many web sites devoted to various aspects of birding that a web search will uncover. They range from the specialized, such as those about hummingbirds, to more general sites such as Surfbirds or National Audubon. State and local Audubon societies, such as NH Audubon, http://www.nhaudubon.org, and bird clubs have informative web sites generally keyed to a limited area. Many individual birders have their own web sites or blogs. Since many birders are also photographers, there are many photo gallery web sites as well.

So the wonderful world of birding can be as entertaining, recreational, educational, or absorbing as you want to make it. Welcome!