SPECIAL REVIEW

The recent proliferation of birding software has caused a problem for birders wishing to computerize their observations. Each advertisement makes similar claims, so it's the differences that need to be considered before choosing a program. This article will try to point out some of the subtle and not so subtle differences between the more popular systems.

The four packages reviewed are *BirdBase 2*, by Santa Barbara Software, *Plover*, by Sandpiper Software, *DataHawk*, by Turnstone Software, and The *Sialis* System, by Alfred Milch. Each of these systems is written for the IBM-style personal computers and their clones. To test their ability to run on different generation machines, each program was evaluated on three different computers. The machines were chosen to represent the spectrum of the existing personal computer market; an older slower 8088 Turbo, a 286, and a 386. As would be expected, the slower the machine, the slower the software performed. Each package ran well, with the possible exception of *DataHawk* on the older 8088 Turbo. Both *DataHawk* and *Plover* are written using dBase. dBase becomes progressively slower as the amount of information it is forced to handle increases. One way to avoid this problem is through the use of a compiler. The programmer of *DataHawk* has made assurances that this problem is being corrected with such a device. If a 286 or higher machine is used, any of the programs should run well in their current form.

The first limiting factor in finding the right program is, what birds are covered by the database? Both *BirdBase 2* and *Sialis* contain a world list. If a world list is a requirement, then *DataHawk* and *Plover* will not be viable choices. *Plover* will have a European list in the future, but at this time it has not been completed. *DataHawk* has no current plans for a world list unless a demand is expressed. *BirdBase 2* handles the world list requirement well. Their world list of birds does not have to be combined with the list of North American species. The opportunity is available for expansion, but the system is unnecessarily burdened with extra material. This system may be ideal for those individuals who do not travel now, but would like the opportunity to add to their existing lists when their birding horizons broaden. *Sialis* is exclusively a world list. This is not necessarily a negative point for birders who do not need this feature. The system provides the option of selecting only the birds of North America (including most of Mexico) and just those species will be displayed for selection.

Each system handles its bird lists differently and this is the second point of review. *BirdBase 2*, *Plover*, and *Sialis* provide all species from the ABA and/or AOU area in taxonomic order. These lists must then be searched to find the desired species. *DataHawk* also has this feature, but allows for a more specific choice. With *DataHawk*, a number of different selections may be made: the birds of the ABA area, Continental North America, or a group of states (NC, SC, Va. and Ga). The system will even allow for more specificity by choosing just the birds of NC, or even one state's regularly occurring species. This is a wonderful option that allows the user to become familiar with a specific area's birds.

Each program, save *Sialis*, has a similar system for moving through its bird lists. The bird's full name may be typed and that record will be highlighted for

entry or edit. Partial names may also be entered and the system will then jump to that area. If "vireo" was typed in, the screen would jump to the area on the list where vireos are located. *Plover* even allows for the entry of a code similar to that of the North American Bird Banders. *Sialis* requires the observer to pick a family group, such as Divers. The system will then list all the divers in the desired area of the world. The species is then chosen by entering the corresponding number next to the bird's name. A complete world list is provided with the system to aid in this process.

For all the time spent entering data, the system chosen should provide the desired information. This criterion should be the most important. If the program chosen does not allow for certain data, then it can not provide them as information later. *DataHawk* may be the lister's dream. When entering information, *DataHawk* automatically updates all relevant lists. It provides for year and state lists for all states and provinces, as well as a home county list. It can reference 100 of the birder's favorite areas and sort by year and species for these locations. *DataHawk* has the built-in feature for two separate birders, one for the primary observer and one for a birding companion. Both lists can be searched against each other and by any of the above categories to see what one birder has seen and the other has not. Besides displaying sightings in any of the given combinations, *DataHawk* can also provide what has not been seen in a specific state or area. This then allows for lists of target birds. In addition, *DataHawk* has two "special place" areas, which you choose. The system will provide a month by month spreadsheet of what species have been seen in these two frequented spots. *DataHawk* will also display a message if a bird is a lifer, state, or year bird.

There is also a wide variety of built in lists which *DataHawk* can produce, with the promise of more. Life lists can be printed in taxonomic or chronologic order. State lists can be printed, as well as specific counts of species seen in any area. With just a few keystrokes, *DataHawk* can provide a list of any or all states' countable species, all from a menu.

The upside to *Datahawk* far outweighs the down. The largest problem I have found concerns adding species to the lists. Sightings must be entered in the order they are observed. If a Loggerhead Shrike was spotted on the 2nd of September and 14th of October, the September Shrike would need to be the first bird entered into the system. *DataHawk* will place the first record of a given species into all relevant slots. If the October Shrike was entered first, the system would not recognize the September bird as being the year or state bird because the October bird would already be in those spaces. Only with life sightings will a previous date be recognized. For the industrious lister, this can be a problem if large amounts of past data are being entered.

Plover is quite similar to *DataHawk* in its construction and has many of the same features available, but to a different degree. This program does have an enviable feature that may make this system the choice for the "scientific" birder. *Plover* has the ability to search by a specific code determined by the user. The space for the codes is limited, but should be sufficient. Since the user determines the code, the user determines what information is important. Codes can represent almost anything the birder wants to keep up with: a code for "Bird reportable to American Birds," a code for the weather, a code for female, nest, bird singing; for most anything. A code can also be used to keep life and

state lists for different birders. For example, lets say an FR was entered in the code space for every bird seen after the passage of a cold front. If information on the frequency of Canada Warblers observed after a cold front was desired, it would be a simple task. At the end of the season the system could be sorted by FR and Canada Warbler, then by Canada Warbler without the FR. The information then could be used to provide an answer. The code field has the opportunity to provide specific PREDETERMINED information. Because *Plover* is a dBase program, the industrious birder could modify the fields and potential for different types of information. *Plover*'s dBase construction allow the birder to sort by any field he/she wishes.

To retrieve information from *Plover's* database, the user must design what he/she wants. The lack of specific menus and the necessity of a personalized code system may cause the casual computer birder some problems. *Plover* is not as menu driven as *DataHawk* and much of the desired information would take longer to extract. *Plover's* strength lies in this flexibility, but effort must be put into this system to make this an advantage.

If a world list is a requirement, *BirdBase 2* may be the choice. A recent software improvement allows for quick review of the entire species listing. The previous time lag is no longer a large problem. *BirdBase 2* handles large amounts of information well and will not exceed the space limitation of the average hard drive. This program provides for an Inclusive, Nation, Region, Locale and Home list. The definition of what these fields mean must be determined by you. *BirdBase 2* has a similar code system to that of *Plover*, but it is much more limited. Instead of the option to enter any code in a single space for each species, as in *Plover*, *BirdBase 2* provides four spaces for a specific predetermined code. Each space must be a question and an X in that space would provide a yes answer. Example: You decide that Space 1 = singing bird, Space 2 = nest located, Space 3 = seen at favorite birding area, and Space 4 = seen with Todd. If you were birding at your favorite place with your birding pal Todd and heard a Bobolink singing, spaces 1, 3 and 4 under Bobolink would be checked. Each of these fields can then be sorted against any of the others to provide lists.

Sialis maintains records in a different manner than other systems. It stores every trip as a separate file, naming that file by the date upon which the birds were observed with the extension representing a location. To find the birds seen on a Christmas Count in North Carolina, both the date and what was used for the file extension would need to be known. Example: 12-15-90.NCa, this could represent the trip date: December 12, 1990 and the place, North Carolina.

Most of the information that other systems allow to be sorted must be entered to *Sialis* in document format. This basically means that it can not be sorted, at least I don't think it can. I found it difficult to determine how to retrieve the information I wanted once entered into the system. I may be underestimating the power of *Sialis*, but there is a lot to be said for good documentation.

A computer is not likely to replace your field notebook, but it can become an integral part of your birding experience. The information above should aid in the selection of a software program to meet a specific need. If any future information is desired about one or more of these products, most manufacturers

have provided me with demo disks that I would be happy to pass on, as well as answer any questions.— *Roger D. McNeill*

Ordering Information:

DataHawk
Turnstone Software
1838 Barry Avenue
Los Angeles, CA 90025
(800) 654-5676

The Sialis System
A. Milch
461 Palmer Avenue
Teaneck, NJ 07666
(201) 836-1496

BirdBase 2
Santa Barbara Software Products
1400 Dover Road
Santa Barbara, CA 93103
(805) 963-4886

Plover
Sandpiper Software
9 Goldfinch Court
Movato, CA 94947

Animal Rights/Animal Welfare

The animal rights movement is impacting wildlife management programs across North America. Fish and wildlife management agencies, at both the Federal and state levels, are being challenged more often over traditional uses of animals such as hunting, trapping, fishing, and habitat management. Many wildlife professionals in the past took the view that the animal rights movement eventually would fade away, and, therefore could be ignored. However, the movement is growing, well-funded and effectively presents its arguments to many segments of the public. Nationally, there are approximately 400 animal activists groups, with estimated annual budgets of $250 million.

The methods used by the animal rights movement to challenge fish and wildlife management agency operations are numerous and varied. Issue number 89 discusses the animal rights/animal welfare movement. For a copy of Newsletter No. 89 or more information about the Fish and Wildlife Reference Service, call 1-800-582-3421.