## A METHOD FOR KEEPING NOTES AND FILES DEALING WITH ORNITHOLOGY

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ETHOD in handling personal notes and records pertaining to work in various branches of science is so perennial a subject for discussion that the present writer may be pardoned for outlining briefly a scheme found of advantage in an accumulation of papers from over twenty-five years of active labor in various branches of ornithology. It is obviously important to keep notes in such a manner that they may be available for consultation with the least expenditure possible in time and labor, as otherwise they are useless. The scheme presently to be outlined has been devised with this end in mind.

In introduction it may be said that the writer, as a boy in the late nineties, had an inkling of the value of loose leaf records and, though such methods were wholly unknown to him from contact with others, conceived a scheme of keeping field notes on slips of paper, using a separate sheet for observations on each species of bird. These sheets were pierced by two holes in one end, and were carried in the field on a frame constructed with two smooth wires to receive the paper, an upright back, and a hinged cover, all of light wood. The sheets were removed when used and filed in pigeon holes, an opening being assigned to each species of bird.

After some years at this, through instruction found in the introduction to Coues' Key, a journal system was started which covered general matter as well as observations on birds, and later included a field catalog of specimens. For a time this sufficed; but as journals increased in number and miscellaneous notes and drawings of all sorts accumulated in other form, it was appreciated that there was frequently great loss of time in locating desired data when wanted, if they could be found at all. This led, after some thought and experiment, to the elaboration of a simple system that has stood the test of twelve years of active work and seems to serve all necessary purposes. Details of the system are as follows.

In work in the field I use a loose leaf note book that holds paper five inches wide by eight inches long. This I have cut from Empaco Bond, ruled transversely in faint blue to give nine spaces to every two inches, with a space of five-eighths of an inch at the top for headings. This paper is strong but thin. To hold this, a cover with round rings should be chosen (I use the I-P holder no. 2308), as flat rings have a tendency to cut the paper. The ordinary cover with rings an inch in diameter will accommodate 300 sheets of the paper mentioned.

In daily observation I carry a small note book of pocket size in which to jot down records of song, peculiar habit, or anything else of interest in highly abbreviated form. In the permanent note-book a daily journal is kept in the front with statement of date, area visited, remarks on vegetation, persons, or any general features of interest. Behind this is a section devoted to birds, with a separate sheet for each species, headed with the scientific name of the bird (the common name would serve as well). On the first line is written the locality, underlined to make it stand out, followed by the day of the month and the year. Following may be a simple statement, as "seen", "common", with any note of interest. For subsequent days at the same locality the month and day are entered with additional observations. If the site of observation is changed, the new locality is written in at the beginning of the next vacant line and notes entered as before. All this is done with reasonable but not meticulous neatness.

In work in North America the separate sheets are arranged in A. O. U. Check-list order. Each evening I run through and fill in all data in the proper place, referring to the little notebook for any information accumulated during the day. Sheets are used on both sides, leaving vacant a space of five-eighths of an inch on the inner margin for subsequent binding. As one sheet is filled, a blank one with the proper heading is substituted.

Notes on dissections or other matter that I desire to keep separate from observations on habits are written on separate sheets, either in the front or back of the notebook, each sheet thus used being headed by the name of the bird, the place and date. As the cover becomes too full, the completed sheets and journal are removed and filed in an envelope for safe keeping.

In work in foreign countries where strange birds of unknown name are frequently encountered, some catch name, usually descriptive, is written in pencil at the top of the sheet and reference is made to the skin catalog numbers of specimens taken to assist in subsequent allocation of data. Subsequently, when the collections made are studied, the proper names are written in, in ink.

Where there is change in locality bringing an entire shift in the avifauna, as from Maryland to California, an entire new set of species sheets is begun to avoid useless clogging of the notebook with forms not present. The paper used is inexpensive so that there is no profit in searching for sheets previously removed from the notebook cover and put away in order to make new entries. It is simpler and better to start another sheet. In the diversified avifauna of the Tropics a bird may be met only at intervals of months, but observations entered on separate sheets and removed from the cover may be arranged properly together, later.

At times, the daily task of running through the sheets seems laborious; but subsequently, when trips or sets of observations are completed, one feels more than repaid by the facility with which notes may be consulted. The system as outlined serves all the purpose of a roll book such as is used by many, since it gives daily records of occurrence and has room in addition for endless observations of additional kind. It is possible with this system to write accounts of field observations after an interval of years as readily as while details are still fresh in mind, as all data is assembled where it can be digested and condensed into the form desired without necessity for endless examination of pages of extraneous interest.

In practise, field notes on birds when completed are all assorted in proper order and are placed in spring-back binders. As journals accumulate they are arranged properly and then bound in permanent binding (at some bookbinders), with inclusive dates stamped on the back of each volume. Usually a sheet in the front gives dates of various expeditions, and twenty or twenty-five blank sheets bound in the back furnish space for inclusion of any data that it may be desirable to add later.

In work in the laboratory or museum the same five-by-eight sheets that have been described are frequently used. Where the notebook is not at hand, however, rough notes are made on any piece of paper, up to ordinary letter size, that comes to hand.

Many of these written notes have no particular significance and are destroyed when they have served their purpose. It is frequently desired, however, to preserve rough notes for further reference. For this purpose I employ manila folders, letter size, placed in drawers in a filing cabinet. My work has been more or less cosmopolitan, so that a comprehensive scheme is required. A series of heavy guide cards is marked with the names of the families of birds of the entire world, arranged in systematic order. Behind each family guide there is first a manila folder for general notes on the family and then a series of additional folders, one for each genus on which

there may be observations. In these folders are placed any miscellaneous sheets of notes containing references to literature, measurements, notes on specimens, drawings, photographs, and author's separates (where these concern individual families, genera, species or subspecies). When the five-by-eight field notes that have been described have been written up in final form they also are filed in these same holders. A manila folder for a genus may thus have a set of notes dealing with several species, and it may include a wide range of subjects from published descriptions of new forms to rough notes on anatomy. Many of these may not be wanted again after they have served their original purposes, but if desired they are at once available without loss of time in search for them.

A second series of folders is devoted to avian paleontology, a third to anatomical subjects, general topics, and so on. The scheme is highly flexible and can be adapted to any need. Folders with double thickness tabs such as are now available from the Library Bureau are preferable, since they stand wear better than the ordinary form.

As an example of the effectiveness of this filing system I have examined in the past month data on certain birds prepared over twenty years ago, all without the slightest loss of time. The method perhaps may not be as handsome as series of notes all made or copied on uniform cards, but it is highly practical in that it requires no waste of time or effort in maintenance. In actual practise I accumulate miscellaneous notes in a tray and file them once a month, or oftener if so minded. At present my notes are in steel cabinets with sliding drawers, but this is not necessary. For years I kept them in wooden boxes of the proper size.

In addition to the file of notes that has been described, a manila jacket is assigned to each manuscript under preparation, in which all notes pertaining to that particular paper may be kept together where they are readily available. Thus a piece of research may be laid aside for weeks or months and then brought out with all material immediately at hand.

The scheme as outlined may be modified to suit individual needs. Where varied work of any extensive character is carried on, it is certain to prove highly effective. The form of field notebook here described has been adopted by a number of the workers of the Biological Survey.

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