INTRODUCTION

Thank you for archiving your sound recordings at the Cornell Lab of Ornithology's Macaulay Library (ML) and for providing valuable metadata associated with your recordings. This guide includes detailed information about using the Macaulay Library Data Entry Spreadsheet in Microsoft Excel. Through the use of example entries, drop-down selection menus, and data constraints, this spreadsheet is designed for fast, accurate data entry. If you have suggestions for improving this spreadsheet, please let us know.

The Macaulay Library Data Entry Spreadsheet is organized to allow recordists to quickly and easily enter important metadata associated with their recordings into a single Excel spreadsheet. At the same time, it contains several mechanisms for collecting standardized data from recordists worldwide, so that all data can then be incorporated into the existing ML database, which contains more than 250,000 data records.

The Macaulay Library Data Entry Spreadsheet contains a total of four worksheets:
• the primary "Data Entry" worksheet, where you will enter your data
• the "Country & State" worksheet with the official list of country and state names
• three reference worksheets that contain lists of standardized names for recording equipment

In addition, you will receive a separate Excel file with the latest version of the eBird Taxonomy, ML's official reference for bird names.

BASIC INSTRUCTIONS

The Macaulay Library Data Entry Spreadsheet is designed specifically for the cataloging of digital sound recordings. If you would like to catalog analog recordings, please contact Matthew Medler (mdm2@cornell.edu) for an analog-specific data entry spreadsheet.

The "Data Entry" worksheet, which contains several lines of sample data, is where you will enter the data associated with your recordings. In several columns in the "Data Entry" worksheet, a small drop-down button will appear when your active cell is in that column. This button will appear immediately to the right of your active cell, and will contain two black triangles (one pointing up and one pointing down). Clicking once on this button will show a drop-down list of all of the acceptable values for that data field. The first drop-down button appears in the "Month" column, and provides twelve choices, for each month of the year. You can enter a value in a cell in this column by either clicking on one of the selections in the drop-down list, or by typing one of the exact acceptable values directly into the cell.

This guide contains detailed information below about each of the data entry fields found in the "Data Entry" worksheet. It is our hope that the guide, together with the sample data included in the "Data Entry" worksheet, will provide a clear explanation and illustration of the data that we would like to receive from you. If, however, you have any questions about any data field, or the general use of Microsoft Excel, please contact Matthew

Medler at mdm2@cornell.edu. Thank you again for your valuable contributions to the Macaulay Library.

DETAILED INSTRUCTIONS

Saving Your Data
• After downloading the Macaulay Library Data Entry Spreadsheet, please rename the Excel file so that it includes your name, as well as general date and locality information (e.g. "Kellogg Florida 1950.xlsx").

Sound File Name(s)
• The basic archival unit at ML is an ML catalog number, which represents the complete recording event of a subject. A complete recording event might be captured in a single sound file, but in many cases, the event is captured in several related sound files. As an example, Row 3 of the sample data in the Macaulay Library Data Entry Spreadsheet lists two sound files: 1002.wav and 1003.wav. File 1002 contains natural songs of an individual Yellow Palm Warbler (Setophaga palmarum hypochrysea), and File 1003 contains songs of the same individual made in response to playback right after File 1002 was made. Because these two files are of the same individual bird, and were made during a single recording event, they are archived together as a single ML catalog number.
• Grouping related sound files together as in the above example makes it easier for an archivist to properly archive your recordings.
• If you wish to use the Macaulay Library Data Entry Spreadsheet to organize all of your sound files from a recording trip, including those which you do not wish to archive, please do the following: create an entry listing (in the Sound File Name field) the sound file(s) to be omitted; and enter "Do Not Archive" in the Subject. This will allow you to account for all of your sound files, while also making it clear to ML archivists which files should (and should not) be archived.
• The ML archival software has a file name limit of 27 characters. We therefore ask that you limit the file name length of files sent to us to 27 characters or fewer.
• Some sound recorders allow for a variety of sound file naming choices. We recommend exploring these different choices before beginning recording in the field.

Subject
• Select a scientific name or common name from the eBird Taxonomy provided by the Macaulay Library. This checklist includes all categories that are reportable in eBird, such as groups ("issfs"), "spuhs" and "slashes."
• If a sound can only be identified as a bird (and not identified to genus or family level), enter "Aves sp."
• Mammals, anurans, insects and other non-birds are also archived at ML. Please let us know if non-birds are the primary focus of your recording efforts so that we can provide you with the appropriate taxonomic authority.
• If you would like to archive a soundscape, create a Primary Subject of "Environmental Recording" in the "Taxon" field. The "Environmental Subtitle" field allows for a short,

general description of the Environmental Recording ("Dawn Chorus," "Mixed Species Flock," "Seabird Colony") and then more detailed information about the recording can be added to the Notes field if desired.
• Species audible in an Environmental Recording should be listed as Background Species.

Background Species (Optional)
• This is an optional field—you do not have to enter background species.
• If you desire, enter scientific names or common names from the eBird Taxonomy to list audible background species. Separate values with commas.

Same Individual As
• Use this field to indicate that the recording is of the same known individual that has been recorded at an earlier time or date.
• As an example, a single color-marked Banded Wren (*Thryophilus pleurostictus*) is recorded twice on the same day—once at dawn and once in the late afternoon. The sound file for the dawn recording is 001.wav and the sound file for the final recording is 023.wav. For the second sound file, the "Same Individual As" field should contain the entry "001.wav" to refer back to the first recording of this single individual.

Day, Month, Year, and Time
• A time value of 5:30 AM can be entered as either "5:30" or "5:30 AM".
• A time value of 7:30 PM can be entered as either "19:30" or "7:30 PM".
• All time values are displayed as 24-hour (military time) values.

Country and State, Province, or Dept.
• Using the "Country & State" worksheet, select an exact country entry and an exact state/province/department entry.

Distance (km) from, Direction from, Specific Locality
• These three fields can be used together to describe the specific locality at which a recording was made, or the Specific Locality field can be used alone for this same purpose.
• If a recording is from a known village, town, park, or preserve, then simply enter the name of this place in the Specific Locality field. An example of such a place is: "Hubbard Brook Experimental Forest."
• If a recording is made on a road or river some distance from a known site, such as "7 km NE of Felipe Carrillo Puerto on Vigia Chico Road," enter "7" in the "Distance (km) from field," "NE" in the "Direction from" field, and "Felipe Carrillo Puerto on Vigia Chico Road" in the "Specific Locality" field.
• For recordings made in large parks, please include additional information after the park name to more precisely identify the location of the recording. An example of this is: Madidi National Park; Chalalan Field Station; right bank Rio Tuichi
• Special characters, such as á, à, â, ã, ç, or ñ, can be used in the Specific Locality field.
• The best locality descriptions are those that use stable, recognized geographic names; are specific, succinct, and unambiguous; and enable other users to correctly interpret the descriptions.

• Do not include elevation information, informal or personal nicknames, or habitat descriptions in the locality text box—this information should be placed in the Elevation field or in the Notes field.

Latitude and Longitude
• Enter values for latitude and longitude in a decimal degree format.
• Latitude values from the Northern Hemisphere are positive, while those from the Southern Hemisphere are negative.
• Longitude values from the Eastern Hemisphere are positive, while those from the Western Hemisphere are negative.
• If you need assistance converting degree, minute, second values to decimal degrees, please contact Matthew Medler at mdm2@cornell.edu.

Elevation (m)
• Enter the elevation (in meters) at which the recording was made.
• If the elevation is not known, enter "Unknown" in this field.
• If the elevation is sea level (0 meters), please enter "Sea Level."

Sound Type
• Indicate all of the sound types produced by the focal species in the recording: Song, Call, and/or Mechanical sound.

Stimulus for Sound
• Indicate what stimuli, if any, were used to elicit the sound in the recording. If no stimulus was used, select "Natural."
• If a recording contains both natural sounds and sounds in response to a stimulus, select the combination of "Natural" and the appropriate stimulus used.
• If a stimulus for sound, such as the imitation of an owl, is not found in this selection, include a description in the "Notes" section.

Age & Sex of Individual(s)
• Indicate the number of individuals producing sound in the recording, and, where possible, the age and sex of the individuals.
• For age/sex combinations not found in this section, include such information in the "Notes" section.

How Identified
• Note the means by which you identified the focal species of the recording: Sight, Sound, or Sight & Sound.

Confidence in ID
• Note whether you were confident in your identification (Certain) or whether there is some doubt in the identification (Uncertain).

Notes
- Include any additional information about the recording here.

Recorder
- Select an exact recorder name from the list of recorders found in the "Recorder" worksheet.

Mono/Stereo
- Indicate whether the recording is a mono, stereo, or multi-track recording.
- Two-channel recordings made with a single, mono microphone should be entered as "Mono;" the "Stereo" option should only be used when a stereo microphone configuration is used.

Sampling Rate and Bit Depth
- Indicate the sampling rate and bit depth of the recording
- If you are uncertain of these values, simply leave the field blank.

Microphone(s)
- Select an exact microphone name from the list of microphones found in the "Microphone" worksheet. For Stereo recordings, select two microphone names from the list "Microphone" worksheet, and separate these values with a comma.

Parabola
- If applicable, select an exact parabola name from the list of parabolas found in the "Parabola" worksheet.

Recordist
- Enter your name as you would like it to appear in a formal publication.
- Include any appropriate accents or other special characters.