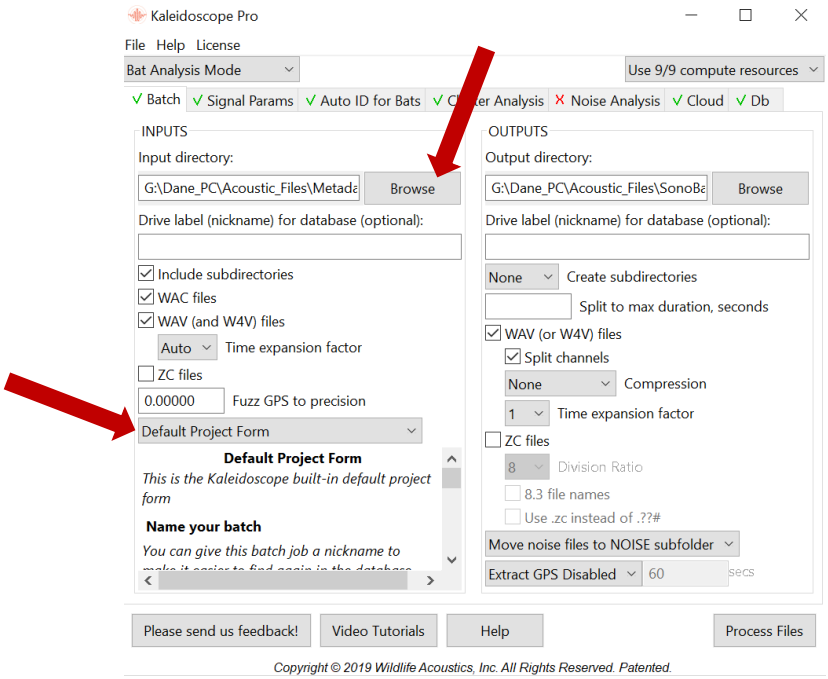
Adding/Exporting NABat Metadata in Kaleidoscope

1. Open Kaleidoscope and click 'Browse' to select the input directory of the folder containing your .wav/.zc files.

NOTE: It's best to select a folder containing all data for a single detector deployment (all nights at a single site). This is the broadest selection for which all files will share the same metadata (SITE NAME, LATITUDE, LONGITUDE, etc.).

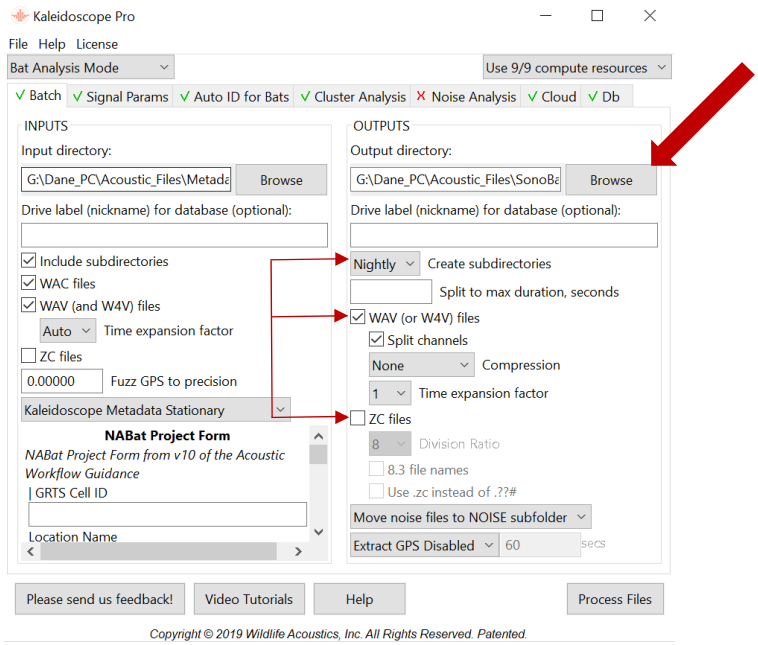


2. Click the drop-down menu above the 'Default Project Form' and select 'Add or Replace a Project Form.' Navigate to the Kaleidoscope NABat Metadata form (available for download here: https://www.sciencebase.gov/catalog/item/5d793c60e4b0c4f70d022da9) and select the file. The NABat metadata form will now load in the bottom of the INPUTS section (the left half of the Kaleidoscope window).
3. Complete all metadata fields for which you have data. Required fields are listed below. Some fields require specific formatting. Hover the pointer over a field for formatting tips and/or a list of accepted entries or see the final page of this document.

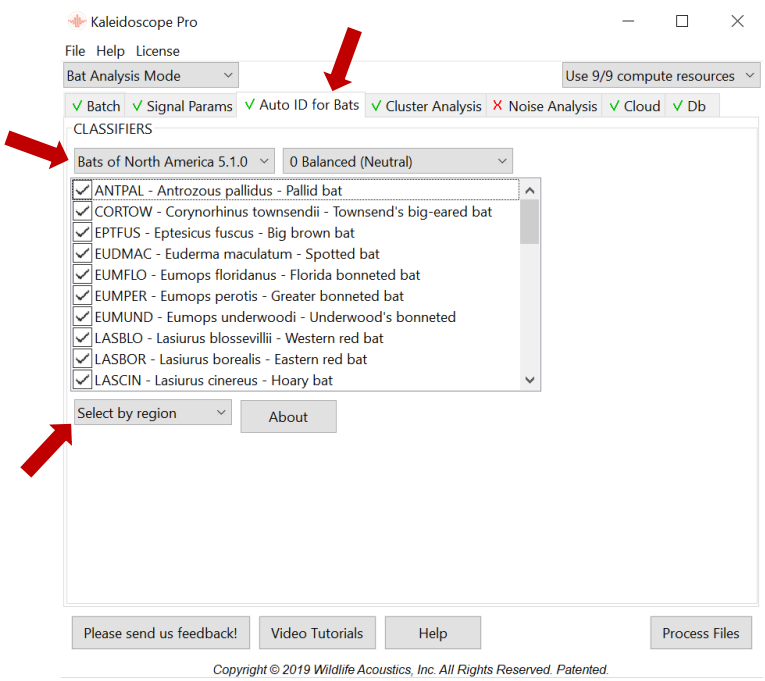
Required NABat metadata fields:

GRTS Cell ID	Survey Start Time
Location Name	Survey End Time

4. Once all required metadata fields (and any additional fields for which you have data) have been completed, select the desired output directory to save processed files by clicking 'Browse' in the top right of the window.



5. Once the output directory has been selected, choose 'Nightly' from the 'Create subdirectories' drop-down menu to keep new files organized by detector night. Next, select the type of output files you wish to create, WAV or ZC (it is not advised to convert .zc files to .wav). In order to successfully export metadata, you *must* select WAV or ZC files in the OUTPUTS window and create copies of the original files during this step. These copies will contain embedded metadata that will be the source of the 'meta' output spreadsheet you will upload to NABat.
6. Next, click the 'Auto ID for Bats' tab at the top of the window. Select 'Bats of North America' from the 'Classifiers' drop-down menu, and select your state/region from the drop-down menu below the list of species. Click 'Process Files' in the bottom right corner of the window.



7. When Kaleidoscope has finished processing, review the automated identifications and confirm or change the Kaleidoscope IDs (manual ID).

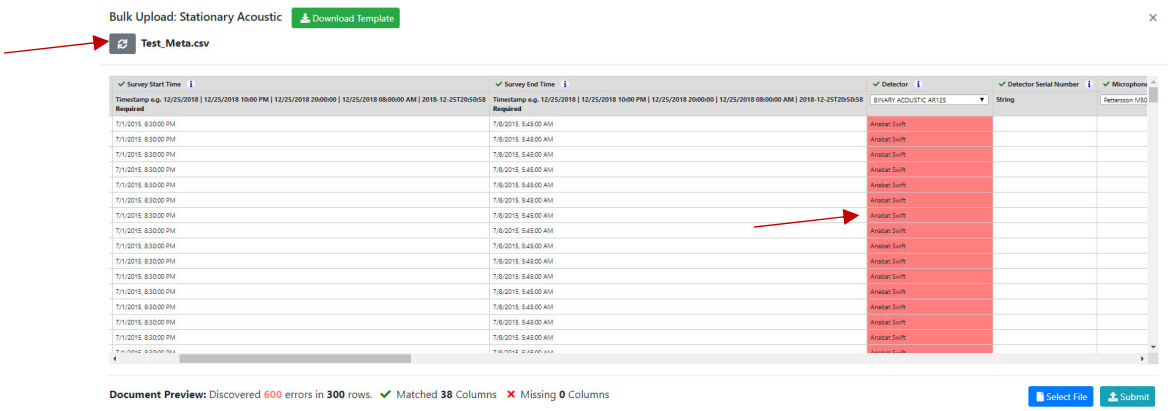
8. If the detector model you are using automatically embeds a date/time stamp into call files, these data should autopopulate and appear in the Kaleidoscope metadata output. If so, you may skip the renaming process. However, before uploading metadata to NABat, you should ensure that the 'Audio Recording Time' column in the 'meta.csv' file contains data. Otherwise, file names must adhere to NABat's naming format, and users should follow the guidance in step 9. If the 'Audio Recording Time' column successfully autopopulates, you may skip to step 10.
9. Open the NABat file renamer (available for download at https://github.com/talbertc-usgs/GuanoMDEditor/releases/tag/0.0.1). Navigate to the folder containing the files you just created with metadata and IDs (this will be a subfolder within the output folder from step 5). Rename all files to ensure they are consistent with NABat naming format and to remove the _000 appended by Kaleidoscope:

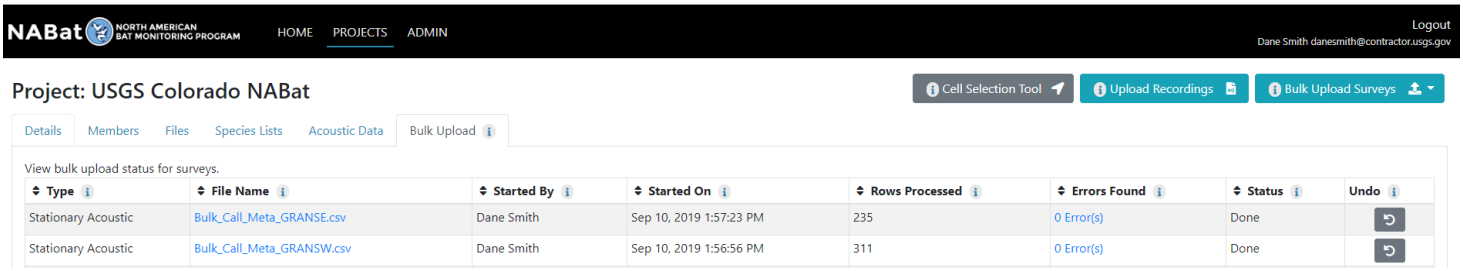
   NABat naming format: GRTSID_SITENAME_YYYYMMDD_HHMMSS.wav/zc

   (e.g. 3773_SW_20190813_215333) *Fields MUST be separated by an underscore. Any other symbol or character will cause errors and files won't be recognized by the NABat system.

   Additional guidance on using the NABat file renamer is available at https://62dc12a5-f8a6-4e76-9a85-99a0a4197512.usrfiles.com/ugd/62dc12_ceba44d1b9f54d6d8ec1fc79ab9d5cff.pdf

10. Once files have been renamed, return to the batch processing window, click 'Browse' in the 'Input directory' window, and select the folder containing the files you just created with metadata and IDs (this will be a subfolder within the output folder from step 5). Select a new output directory. If the box beside 'WAV files' or 'ZC files' is still checked, unselect the box (you won't be creating new files this time, only a 'meta' report containing NABat metadata).
11. Click the 'Auto ID for Bats' tab and select 'DISABLED' in the 'CLASSIFIERS' drop-down menu.
12. Click 'Process Files' in the bottom right corner of the window.
13. Navigate to the current output directory folder and open the 'meta' file. Check to ensure all fields for which you entered data are filled, and ensure one or both of the Auto Id/Manual Id columns are filled.
14. Select the Auto Id column and run a find/replace function to replace NOISE with NOTBAT.
15. Select the Audio Recording Name column and run a find/replace function to remove _000 from the end of your file names.
16. Rename and save the file. Open your NABat project page, click the blue 'Bulk Upload Surveys' button in the top right, select the type of survey you conducted, click 'Full Data Upload,' and select the Kaleidoscope 'meta' file you just renamed.
17. Once the file is selected, a preview window will appear with any errors highlighted in red. Correct any errors (use the drop-down menus to determine the correct formatting and accepted inputs), save the updated file, and click the refresh button in the top left of the preview window. Ensure all errors have been corrected and submit the metadata file to your project page.



* Rows with errors are dropped/ignored by the NABat system, so it is crucial that errors are corrected before the file is uploaded. Otherwise, metadata for those rows will not be saved in the NABat database.

Once the metadata file has successfully uploaded, it should appear under the 'Bulk Upload' tab of your project homepage. The number of rows processed and rows with errors will be listed.