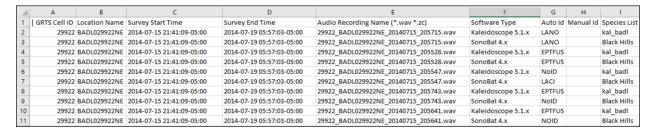# Processing Acoustic Recordings with >1 Auto ID Program

To increase confidence in automated species IDs and reduce the number of files that require manual identification, some users opt to process call files in multiple auto ID programs. The following document provides guidance for processing acoustic bat recordings in multiple auto ID software suites.
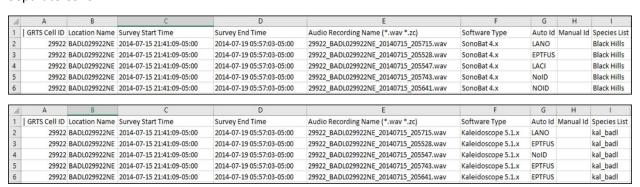
Using Two or More Auto ID Programs for Species ID

In order to provide auto ID values from > 1 software suite, users should upload a row of metadata for each call file for each auto ID program used. For example, if calls are processed in Kaleidoscope and SonoBat, metadata uploads should include two rows for each call. Rows can be combined in a single CSV or uploaded in separate files (one for each auto ID program used).

Single CSV

	A	B	C	D	E	F	G	H	I
1	GRTS Cell ID	Location Name	Survey Start Time	Survey End Time	Audio Recording Name (*.wav *.zc)	Software Type	Auto Id	Manual Id	Species List
2	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205715.wav	Kaleidoscope 5.1.x	LANO		kal_badl
3	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205715.wav	SonoBat 4.x	LANO		Black Hills
4	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205528.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl
5	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205528.wav	SonoBat 4.x	EPTFUS		Black Hills
6	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205547.wav	Kaleidoscope 5.1.x	NoID		kal_badl
7	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205547.wav	SonoBat 4.x	LACI		Black Hills
8	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205743.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl
9	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205743.wav	SonoBat 4.x	NoID		Black Hills
10	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205641.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl
11	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205641.wav	SonoBat 4.x	NOID		Black Hills

Separate CSVs

	A	B	C	D	E	F	G	H	I
1	GRTS Cell ID	Location Name	Survey Start Time	Survey End Time	Audio Recording Name (*.wav *.zc)	Software Type	Auto Id	Manual Id	Species List
2	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205715.wav	SonoBat 4.x	LANO		Black Hills
3	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205528.wav	SonoBat 4.x	EPTFUS		Black Hills
4	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205547.wav	SonoBat 4.x	LACI		Black Hills
5	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205743.wav	SonoBat 4.x	NoID		Black Hills
6	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205641.wav	SonoBat 4.x	NOID		Black Hills

	A	B	C	D	E	F	G	H	I
1	GRTS Cell ID	Location Name	Survey Start Time	Survey End Time	Audio Recording Name (*.wav *.zc)	Software Type	Auto Id	Manual Id	Species List
2	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205715.wav	Kaleidoscope 5.1.x	LANO		kal_badl
3	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205528.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl
4	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205547.wav	Kaleidoscope 5.1.x	NoID		kal_badl
5	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205743.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl
6	29922	BADL029922NE	2014-07-15 21:41:09-05:00	2014-07-19 05:57:03-05:00	29922_BADL029922NE_20140715_205641.wav	Kaleidoscope 5.1.x	EPTFUS		kal_badl

Processing calls and exporting metadata with Kaleidoscope and SonoBat

Users who wish to use the NABat metadata forms for Kaleidoscope and SonoBat should first process calls in Kaleidoscope following the guidance available at Kaleidoscope (Stationary) | NABat (nabatmonitoring.org)

Once metadata has been embedded in the files, users can simply run the files (which contain embedded metadata from Kaleidoscope) through SonoBat's auto ID and follow steps 6-18 of the SonoBat guidance document (beginning on page 5) available at SonoBat (Stationary) | NABat (nabatmonitoring.org)

Note: To successfully export metadata that was embedded in Kaleidoscope using SonoBat, users must download the "NABat_Metadata_Kaleidoscope_SonoBat.xml" form, which is specific to this process: https://www.sciencebase.gov/catalog/item/5dcdd2b5e4b069579760b15a?name=NABat_Metadata_Kaleidoscope_to_SonoBat.xml