

LOUISIANA BIRD RECORDS COMMITTEE

REPORT FORM

This form is intended as a convenience in reporting observations of species on the Louisiana Bird Records Committee (LBRC) Review List. The LBRC recommends the use of this form or a similar format when submitting records for review to assure that all pertinent information is accounted for. Attach additional pages or files as necessary. Please print or type for hard copy. For electronic copy, be sure to save this file to your computer before entering text. Attach field notes, drawings, photographs, or tape recordings, if available. Include all photos for more obscurely marked species. When completed (if hard copy), mail to Secretary, Louisiana Bird Records Committee, c/o Museum of Natural Science, 119 Foster Hall, Louisiana State University, Baton Rouge, LA 70803-3216, or e-mail electronic copy as an attachment to Paul Edward Conover at <zoiseaux@lusfiber.net> .

1. English and Scientific names: Pacific-slope Flycatcher *Empidonax difficillis*
2. Number of individuals, sexes, ages, general plumage (e.g., 2 in alternate plumage): 1 bird (believed to be in its first year, see below for reasoning on age)
3. Parish: Plaquemines Parish
Specific Locality: Caernarvon Diversion—levee and canal
google map coordinates: 29.8582786, -89.9109936
4. Date(s) when observed: February 14, 2020
5. Time(s) of day when observed: 7:50am
6. Reporting observer and address: James F. Holmes (Jim), 4109 U Street, Sacramento, CA 95817
7. Other observers accompanying reporter who also *identified* the bird(s): none
8. Other observers who independently identified the bird(s): The bird was previously found by Robb Brumfield on December 7, 2019. He had tentatively identified the bird in eBird as Cordilleran Flycatcher (not sure why) but later changed it to Western Flycatcher.
9. Light conditions (position of bird in relation to shade and to direction and amount of light): light was good.
10. Optical equipment (type, power, condition): Swarovski 10x40
11. Distance to bird(s): distance as close as 20 feet

12. Duration of observation: did not document time

13. Habitat: hedgerow

14. Behavior of bird / circumstances of observation (flying, feeding, resting; include and stress habits used in identification; relate events surrounding observation):

I went to the specific site where this particular bird was wintering. It was cold when I initially arrived (43F, partly cloudy, NNE 12MPH) at 6:46am.

I initially walked along the hedgerow multiple times but was unable to find it. I then walked across the levee and birded the woods next to the canal. After it warmed up, I walked back over to the hedgerow and played a couple of trials of Cordilleran Flycatcher song (as I was under the impression that the bird was this species) but got no response and was about to give up.

Fortunately, I ultimately found it, and played Cordilleran Flycatcher song again but still no response. I then played Pacific-slope song and it immediately popped up out in the open and appeared interested/agitated. It called several times in response to Pacific-slope Flycatcher song. It did not, however, appear to respond to Pacific-slope Flycatcher call. I took some photos but quickly lost it again. After 5-10 minutes, I relocated it. I again played Pacific-slope Flycatcher song and it popped out in the open again and called several times. Fortunately, this time I was ready and got a recording of its call.

It never responded to Cordilleran Flycatcher call/song or Pacific-slope Flycatcher call.

15. Description (include only what was actually seen, *not what "should" have been seen*; include if possible: total length/relative size compared to other familiar species; body bulk, shape, proportions; bill, eye, leg, and plumage characteristics. Stress features that separate it from similar species, *or for species that are known to hybridize frequently, stress features that help eliminate possible hybrids*):

This was an obvious *Empidonax* flycatcher. It was bright yellow-green in coloration with a bold white eye-ring that came to a point posteriorly (classic tear-drop shaped eye ring of a Western Flycatcher). Slight crest. Lower mandible entirely orange. Two buffy wing bars. Primary projection: medium. Repeatedly pumped its tail (not dropped).

The photos were reviewed by Peter Pyle who agrees that the bird is a Western Flycatcher but also commented that the "bird looks like a first-year by the thin worn rectrices and apparent molt limit between tertials and adjacent secondaries."

16. Voice: The bird called several times and gave the female position note (high pitch tsip). See voice recording and sonogram for specifics (Document 1) but the lower portion of this call ranged from 7.25-9.0 kHz and the upper portion of this call ranged from 14.5 to > 15kHz.

17. Similar species (include how they were eliminated by your observation): I believe the photos adequately demonstrate an *Empidonax* flycatcher in the Western Flycatcher complex and other *Empidonax* flycatchers are sufficiently ruled out by the photographs.

Cordilleran Flycatcher is virtually identical in plumage, and I do not believe these birds can be visually separated unless in hand. These birds can be separated, however, by voice and existing evidence exists on separating these species by song and certain types of calls. Unfortunately, there is not published data on separating the female position notes as no one (to my knowledge) has looked at the possibility of differences in female position notes.

Therefore, I collected data on all the female position notes available on xeno-canto for Western Flycatchers in the breeding season (breeding season chosen as these birds may be identified to species based on being in appropriate range). For Pacific-slope Flycatcher, I took all samples from Baja California, coastal/central California, Washington and Vancouver. For Cordilleran, I took all samples from Arizona and Colorado. I was not able to find any female position notes from areas of potential overlap. I did not take any calls from wintering grounds where identification to species is less clear.

Data is presented in the Tables below for both species. The female position note has a lower frequency (lower) note and in about half the cases a visible higher frequency (upper) note.

Therefore, four points of the female call note can be measured:

- lower end of the low frequency note
- upper end of the low frequency note
- lower end of the higher frequency note
- upper end of the high frequency note

Recognize that the green columns represent the lower and upper ends of the lower frequency (lower) note. The purple columns represent the lower end of the high frequency (upper) note and if the note goes above 15 kHz (the upper range of xeno-canto sonograms). This is recorded simply as Yes/No (a "." is placed if no upper note is visible on the sonogram). Recognize, the high frequency (upper) portion of the note is not always present on the sonograms. See diagram in Document 1 for exact details on the note positions. The frequency was scored to one decimal point in quartiles (0, .25, .50, .75).

Pacific-slope Flycatcher table (Document 2 for raw data)

Xeno-Canto	Lower Note		Upper Note		Location	Month	Year
	lower end (kHz)	Upper end (kHz)	lower end (kHz)	above 15kHz			
XC71891	6.5	8	.	.	Baja	May	2009
XC71876	6.5	8	.	.	Baja	May	2006
XC71875	6.75	8	13.25	Yes	Baja	June	2001
XC71874	6.75	8	.	.	Baja	June	2011
XC71873	6.5	7.25	.	.	Baja	May	2006
XC71872	6.5	7.75	13	No	Baja	May	2006

XC65992	7	8	.	.	Vancouver	Aug	2010
XC553387	7.25	8.25	14.5	Yes	San Luis Obispo, CA	April	2020
XC553386	7.25	8.75	.	.	San Luis Obispo, CA	April	2020
XC545466	7	8.5	14	Yes	San Diego	April	2020
XC534584	7	8.5	14	Yes	Los Angeles	March	2020
XC482293	7	9	13.5	Yes	San Diego	June	2018
XC473430	7.25	8.75	.	.	Washington	May	2019
XC473429	7.5	9	.	.	Washington	May	2019
XC433225	6.75	8.25	.	.	Washington	Aug	2018
XC37051	7	8	.	.	King County, WA	June	2009
XC364807	7	8	13.75	No	Sacramento	April	2017
XC335147	7	8.5	13.5	Yes	Humboldt county, CA	Sept	2016
XC297477	6.75	8.25	13.15	No	Santa Cruz Island	March	2015
XC297476	6.75	8.25	.	.	Santa Cruz Island	March	2015
XC164569	6.75	8.25	13.5	Yes	San Diego	May	2013
XC161144	6.5	8.25	.	.	Vancouver	Aug	2008
XC142826	7	8.5	.	.	Vancouver	Aug	2012

In summary, the Pacific-slope lower note (green) has a lower end that ranges from 6.5 – 7.5 kHz (median = 7 kHz) and an upper end ranging from 7.25 – 9 kHz (median 8.25 kHz). The Pacific-slope upper note is visible in 10/23 samples and never extends below 13.0 kHz and exceeds 15 kHz in seven of the 10 samples.

There is one additional recording in xeno-canto attributed to Pacific-slope Flycatcher obtained in May 2011 from Cochise County, Az. This recording came from a pair of birds identified by Richard Webster as Pacific-slope Flycatcher. The birds were considered migrants and were giving the male and female call notes. I did not include this record in the analysis as it did not come from the breeding grounds but the data is here:

XC124001	7	8.25	14.25	Yes	Cochise County, AZ	May	2011
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Cordilleran Flycatcher table (Document 3 for raw data)

Xeno-Canto	Lower Note		Upper Note		Location	Month	Year
	Lower end (kHz)	Upper end (kHz)	lower end (kHz)	above 15kHz			
XC80680	6	7.5	12.5	No	Arizona	May	2011
XC422195	6	7.25	12.5	No	Colorado	June	2018
XC422194	6.75	8	13.5	No	Colorado	June	2018
XC374103	6.5	8	13	No	Colorado	June	2017
XC322296	6.5	7.25	.	.	Colorado	June	2016
XC317967	6.5	8	13	No	Arizona	May	2016
XC263058	6	7.5	.	.	Colorado	July	2015
XC123656	5.75	7.25	.	.	Arizona	May	2009
XC123655	6	7.25	.	.	Arizona	June	2009

XC123654	5.75	7	.	.	Arizona	June	2012
XC123624	5.75	6.75	12.5	No	Arizona	May	2010
XC123611	6.5	8.75	13	No	Arizona	June	2011
XC123610	6.5	8.25	.	.	Arizona	June	2011

In summary, the Cordilleran lower note (green) has a lower end that ranges from 5.75 – 6.75 kHz (median = 6 kHz) and an upper end ranging from 6.75 – 8.75 kHz (median 7.5 kHz). The Cordilleran upper note is visible in 7/13 samples and the lower end ranges from 12.5-13.5 kHz and never extends beyond 15 kHz in any of the seven samples.

Plaquemines Parish Bird

The sonogram of the Plaquemines Parish bird from the February 14, 2020 observation is shown in Document 1. Its lower note (corresponding to the green columns above) had a lower end of 7.25 kHz and an upper end of 9 kHz. It also had a visible upper note (corresponds to the purple columns above) that starts at 14.5 kHz and extends beyond 15 kHz.

Comparison of the data from the above tables with the Plaquemines Parish bird:

Although there appears to be substantial overlap in the female position note call between the two species such that many (most) are not identifiable to species, there appears to be extremes at either end that are outside the ranges for either Cordilleran or Pacific-slope Flycatcher. Calls at extreme lower frequencies are outside of Pacific-slope, and calls at extreme higher frequencies are outside of Cordilleran.

Lower Note Comparison

- The Plaquemines Parish bird has a lower end of 7.25 kHz which is within the range Pacific-slope (range 6.5 – 7.5 kHz) but above any Cordilleran Flycatcher in xeno-canto (range 5.75-6.75 kHz).
- The Plaquemines Parish bird has an upper end of 9.0 kHz which is within the range of Pacific-slope (range 7.25 – 9 kHz) but above any Cordilleran Flycatcher in xeno-canto (range 6.75 – 8.75 kHz).

Upper Note Comparison

- The Plaquemines Parish bird has a lower end of 14.5 kHz which is within the range of Pacific-slope (range 13-14.5 kHz) but above any Cordilleran Flycatcher in xeno-canto (range 12.5-13.5 kHz).
- The Plaquemines Parish bird had an upper end that extends beyond 15 kHz which was found in 7/10 Pacific-slope Flycatchers where this note was visible but none of the Cordilleran Flycatchers had the note extend above 15 kHz.

Thus, one can measure four points of the female call note:

- lower end of the low frequency note
- upper end of the low frequency note
- lower end of the higher frequency note
- upper end of the high frequency note

The Plaquemines Parish bird has an extremely high frequency to its call note, and in all four of the above measurements, it falls outside the range of Cordilleran Flycatcher.

18. Photographs or tape recordings obtained? (by whom? attached?): Photos and voice recordings obtained and submitted and can also be found in the eBird list:

<https://ebird.org/checklist/S64447884>

19. Previous experience with this species: I regularly see this species near where I live as it is a regular migrant/breeder in northern California (for example, I have seen 13 individuals on 10 different days in April and May 2020).

20. Identification aids: (list books, illustrations, other birders, etc. used in identification):

a. at time of observation: none

b. after observation: I sent the photos and voice recordings to several California birders with extensive expertise with Pacific-slope Flycatcher. All believed this bird to be Western Flycatcher, but none were confident in separating Pacific-slope from Cordilleran based on this call.

I also sent the recordings to Arch McCallum who has studied the differences in voice of Western Flycatcher. (<http://appliedbioacoustics.com/research/wefl/frameindex.html>) His comments were as follows: "I think there is a good chance your bird, with an female position note (FPN) that high, is from the core breeding area ascribed to Pacific-slope Flycatcher (PSFL). I can't say so definitively, because no one to my knowledge, including Andrew Rush and me, has measured freq on a series of FPN samples from known breeding locations. That has been done for the three song-types and frequency does range from a high in the coastal areas of the PSFL range to a low in the central Mexican populations of Cordilleran Flycatcher (COFL). We have the FPN samples, we just haven't measured them yet. As you probably know, extreme PSFL and COFL samples are quite distinct, but every intermediate value is found in the vast hybrid zone that runs from the Sierra/Cascade crest to somewhere in Colorado and Arizona. One of these days, I will be able to take any particular sample and give it a %PSFL score, with confidence limits, but we are not there yet."

21. This description is written from:

<input checked="" type="checkbox"/>	notes made during the observation.	Are notes attached?	See eBird
<input checked="" type="checkbox"/>	notes made after the observation.	At what date?	I have been sampling and analyzing the sonograms for the last several months when time allows.
<input type="checkbox"/>	Memory		
<input checked="" type="checkbox"/>	study of images		

See eBird list: <https://ebird.org/checklist/S64447884>

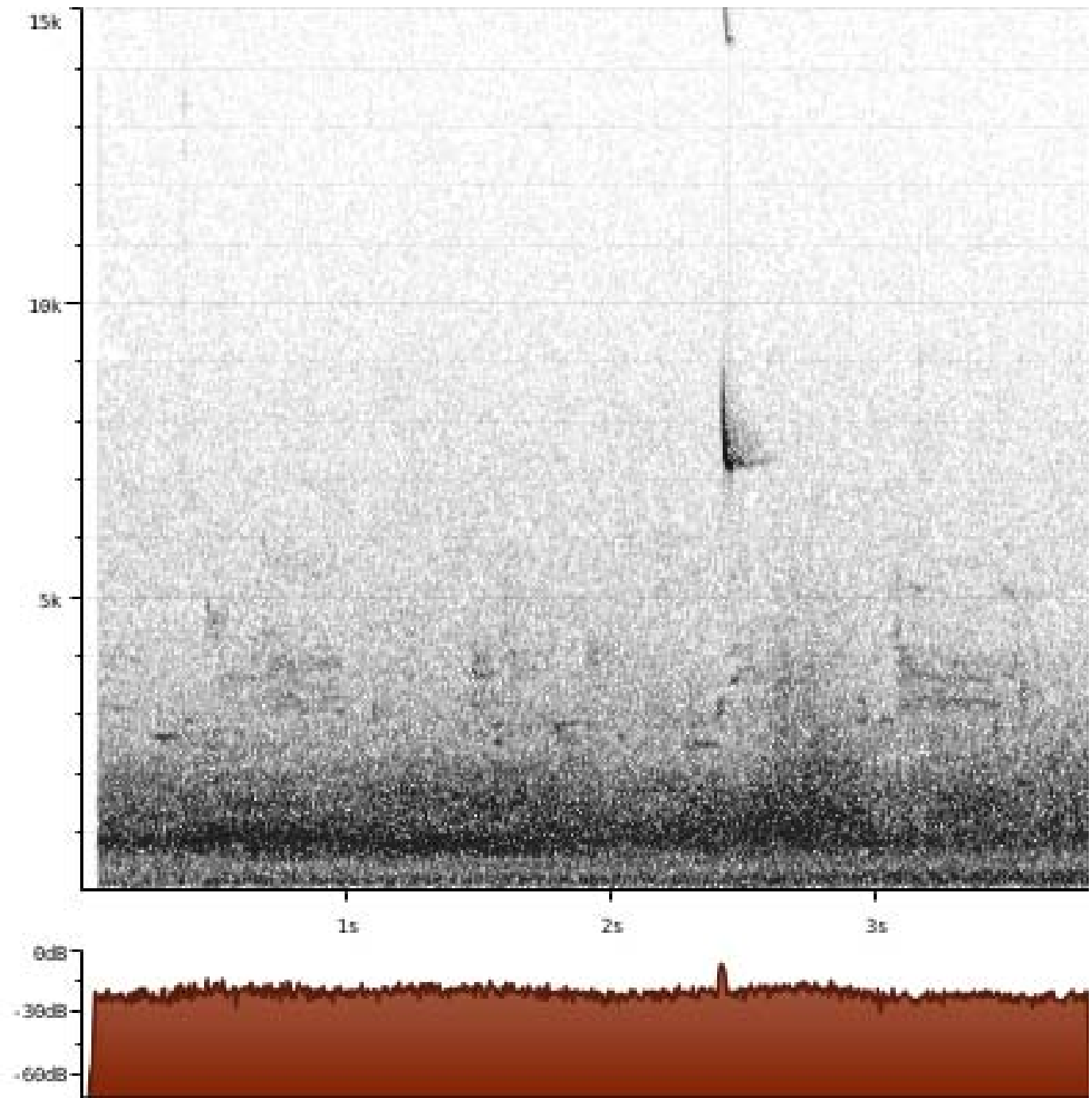
22. Are you positive of your identification? If not, explain: Yes

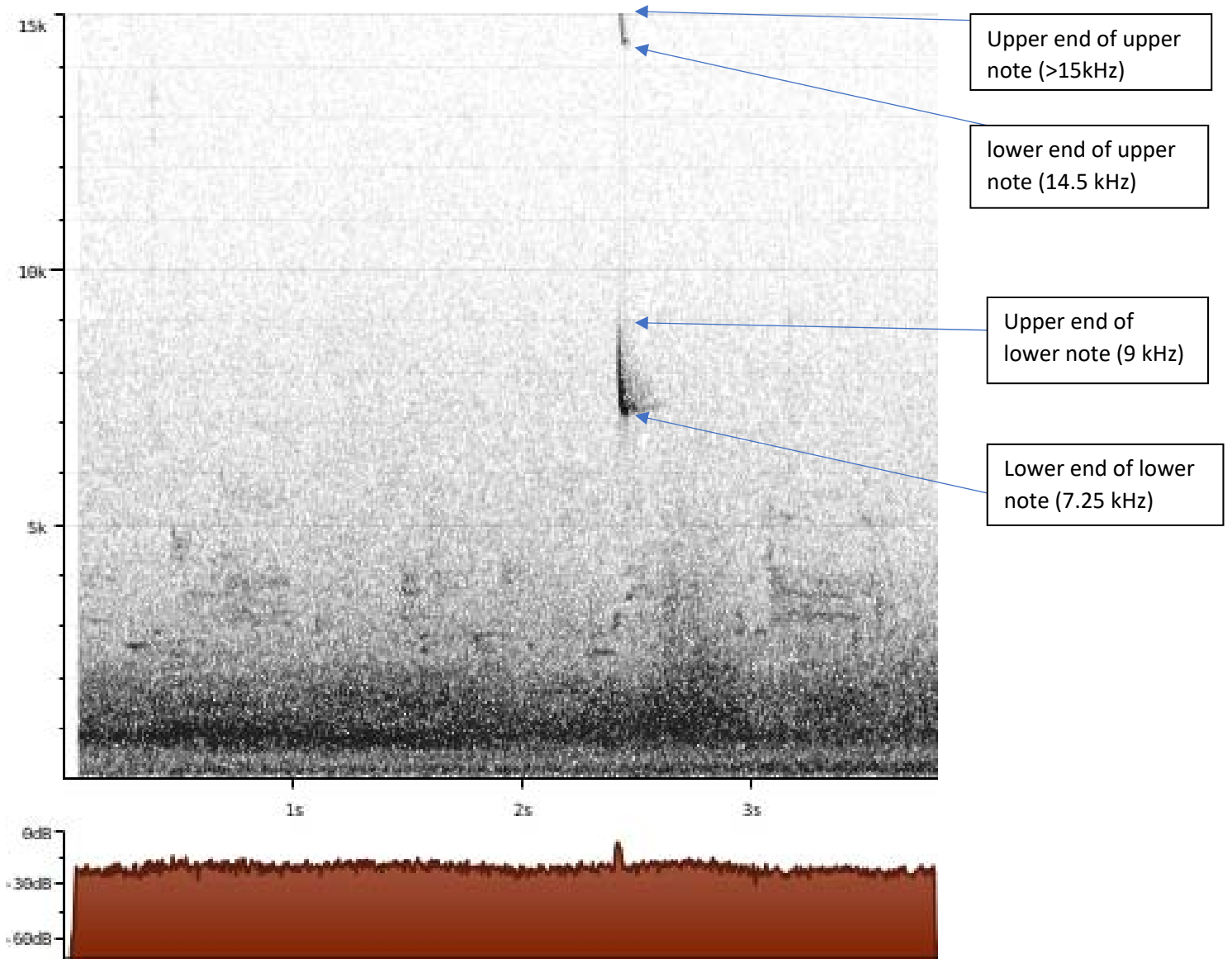
23. Date: May 28, 2020, 2:00pm (Pacific)

24. May the LBRC have permission to display in whole or in part this report and accompanying photos on the LOS-LBRC website and LBRC Facebook page? Yes

If yes, may we include your name with the report? Yes _____

Document 1: Pacific-slope Flycatcher "female" call/position notes (Plaquemines Parish) February 14, 2020



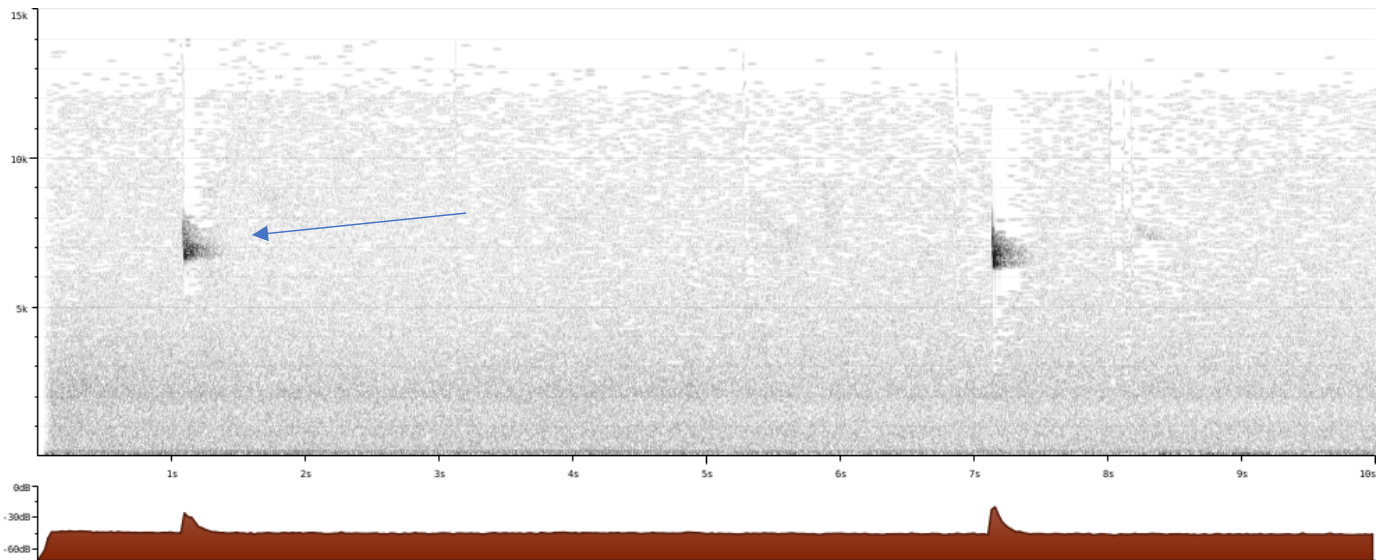


Blue arrows demonstrate the “start” and “end” of the notes. This bird had two parts to its position note. There is a high frequency (upper) note and a low frequency (lower) note. For the Plaquemines Parish bird, the lower note goes from 7.25-9kHz and the upper note goes from 14.5 to >15 kHz.

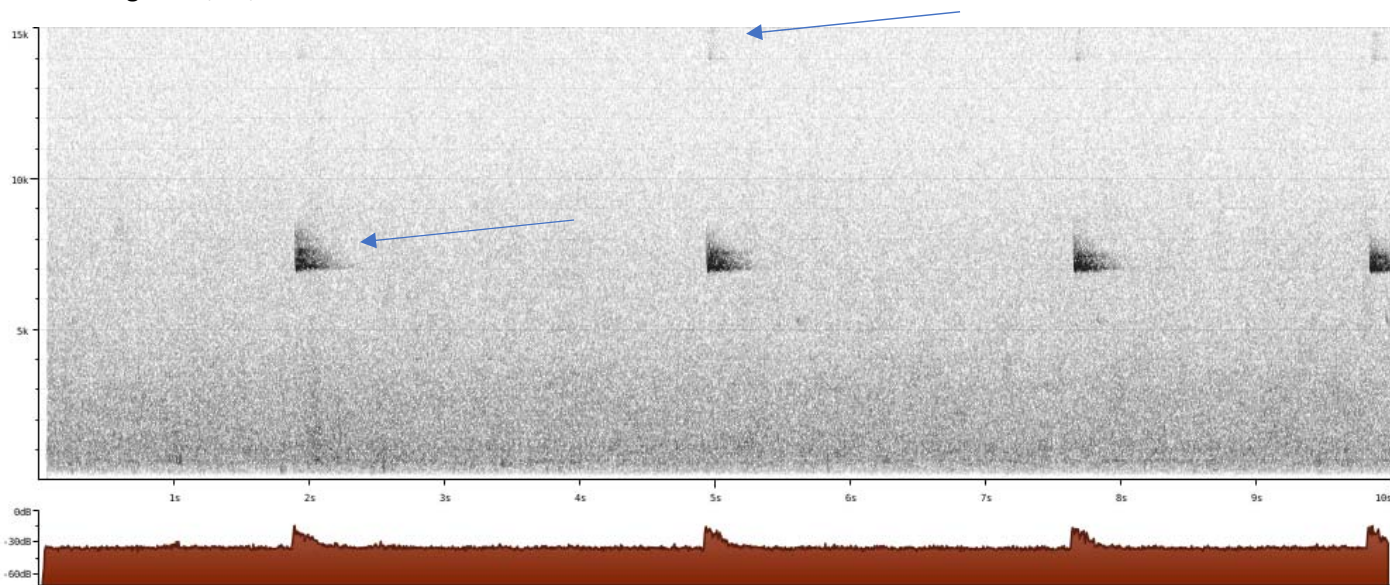
Document 2: Pacific-slope Flycatcher "female" call/position notes (from xeno-canto)

Blue arrows point to the call note.

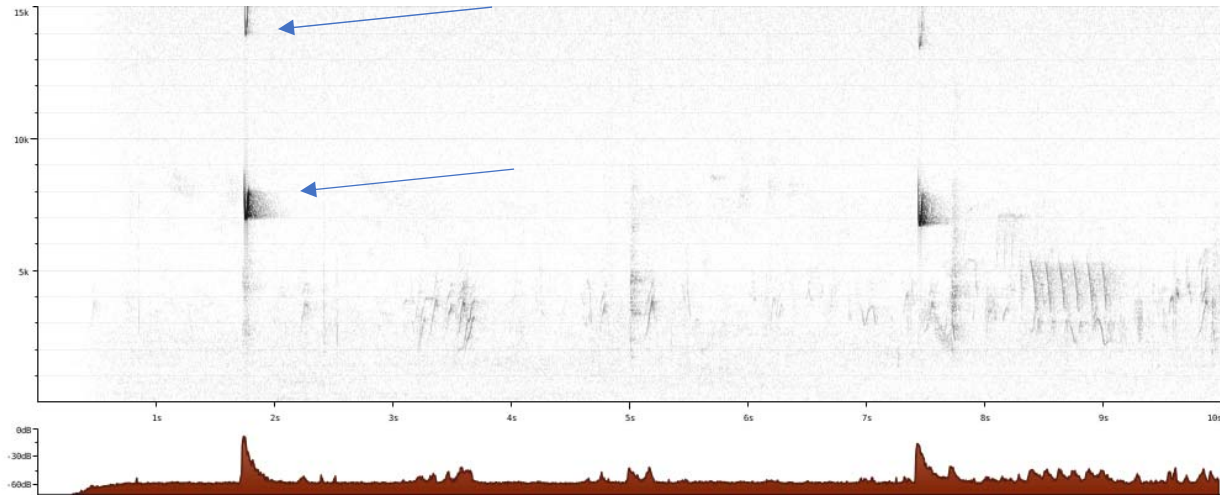
161144 Vancouver Island, BC 8/8/2011



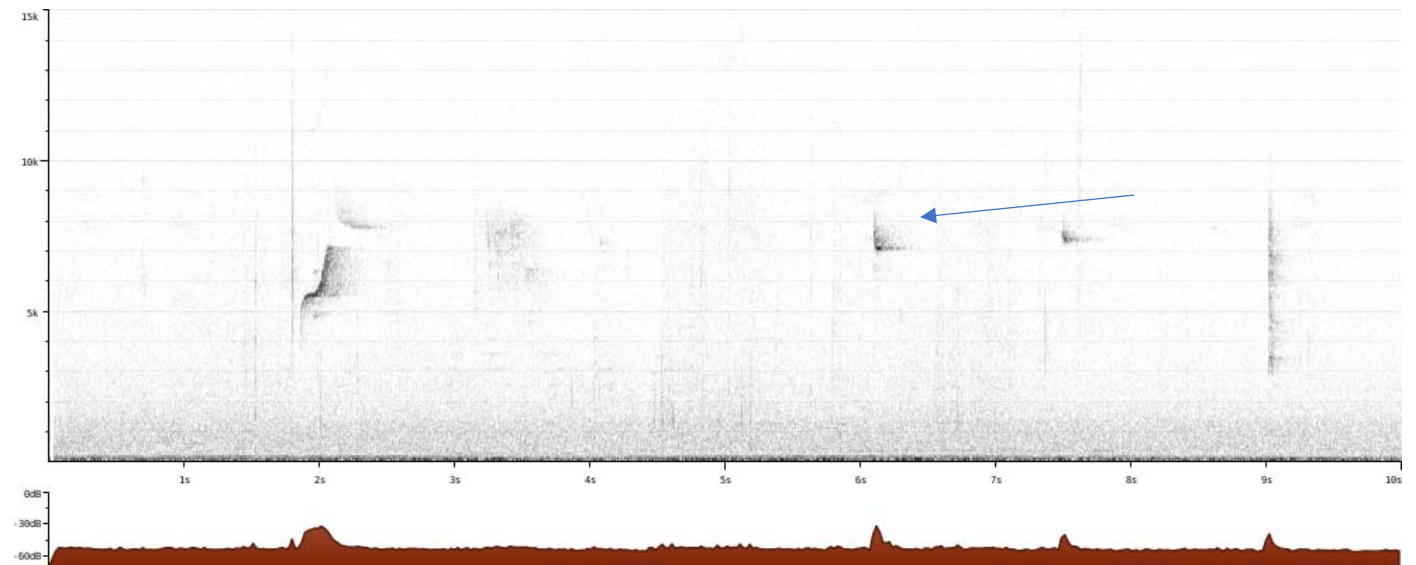
534584 Los Angeles 3/14/2020



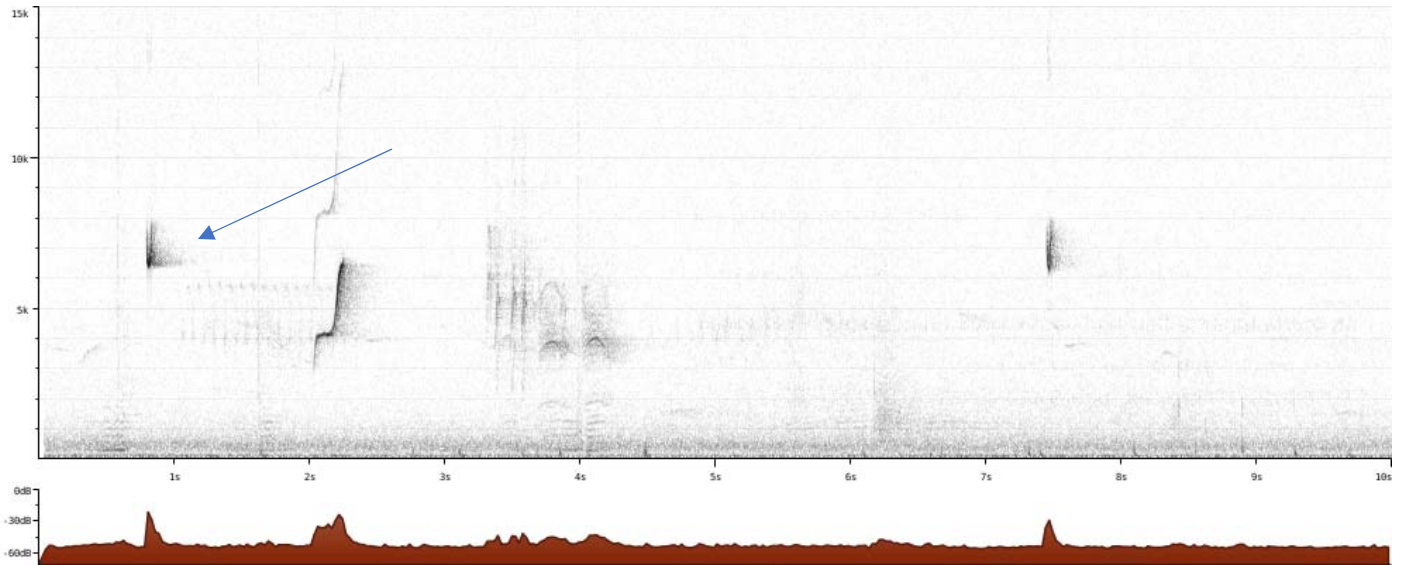
482293 San Diego, CA 6/18/2018



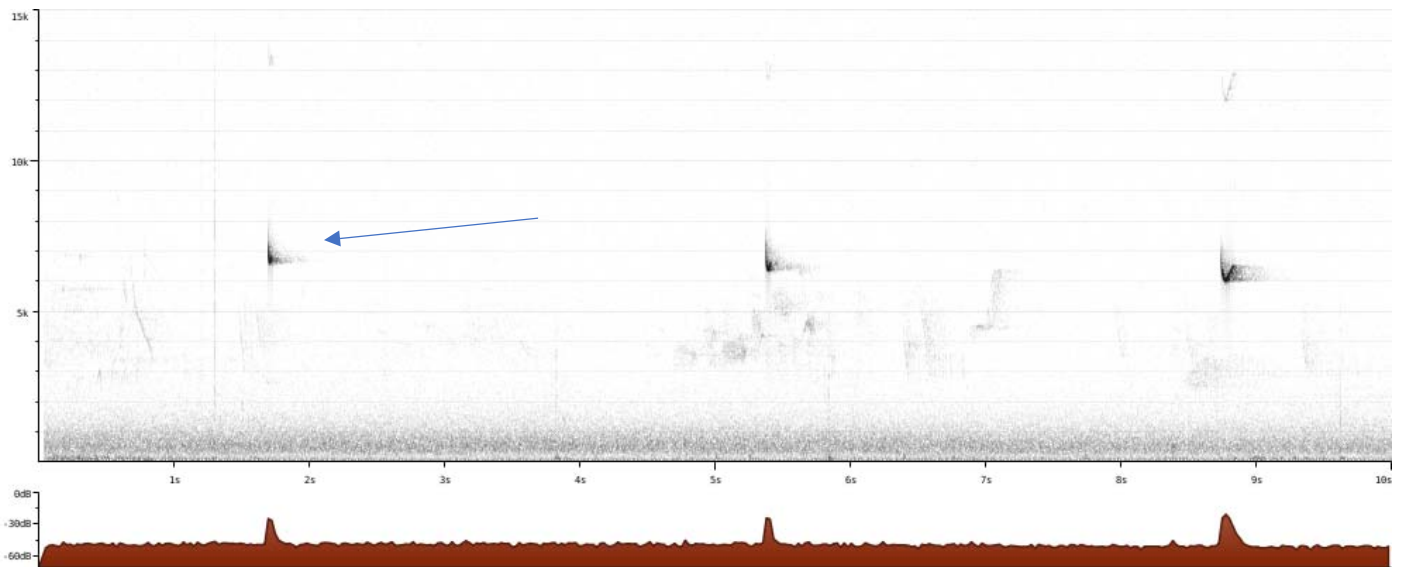
142826 Vancouver Island, BC 8/20/12



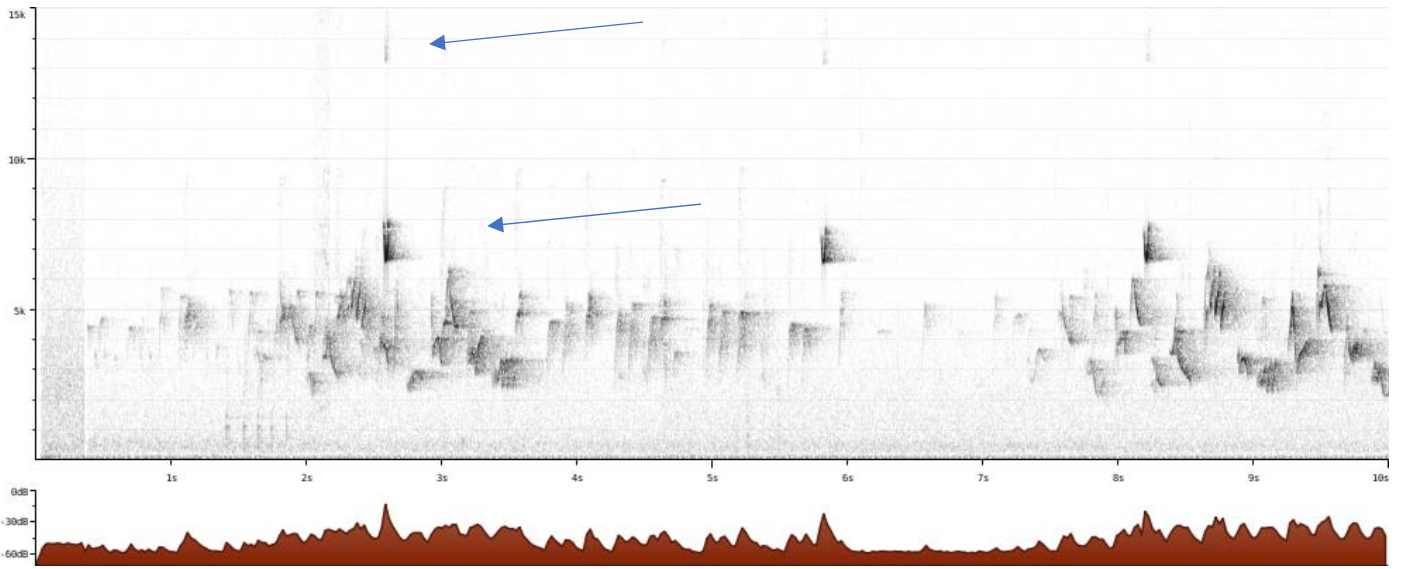
71891 Baja California 5/9/06



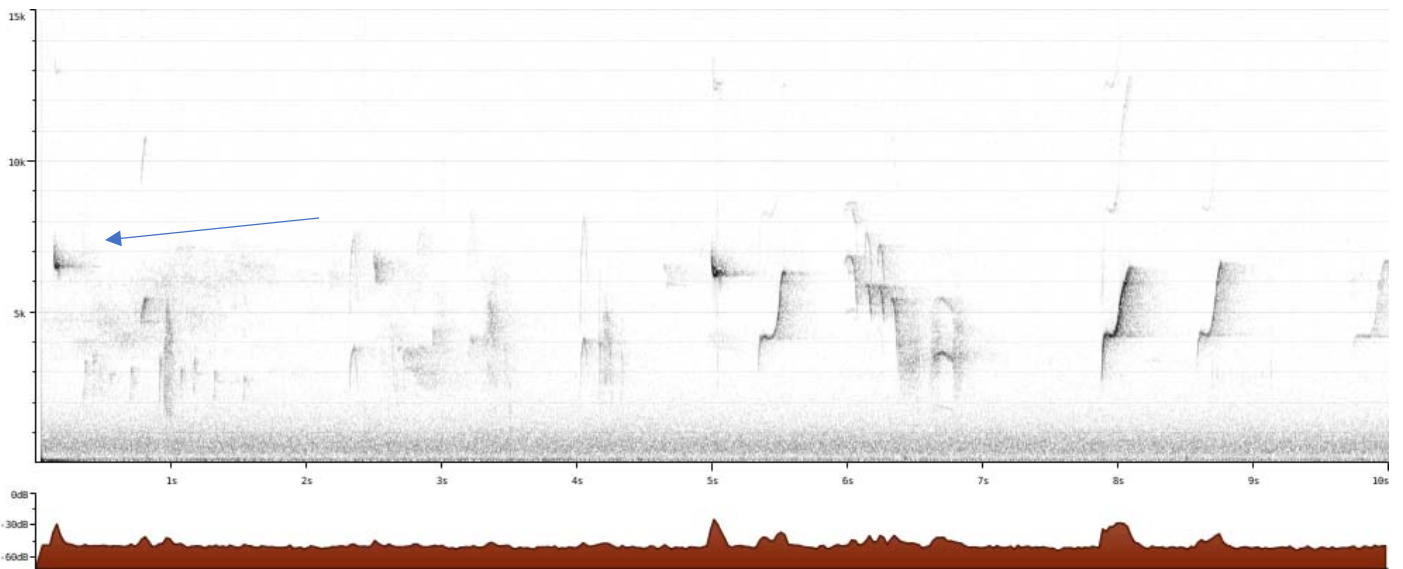
71876 Baja California 5/10/06



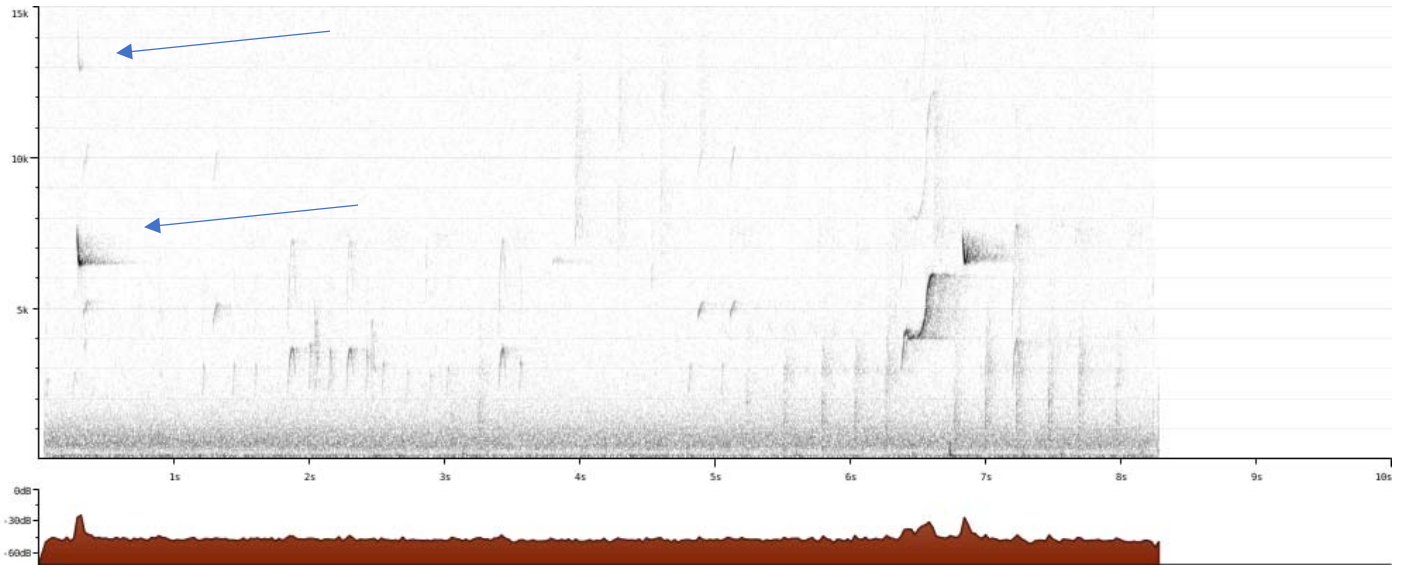
71875 Baja California 5/10/06



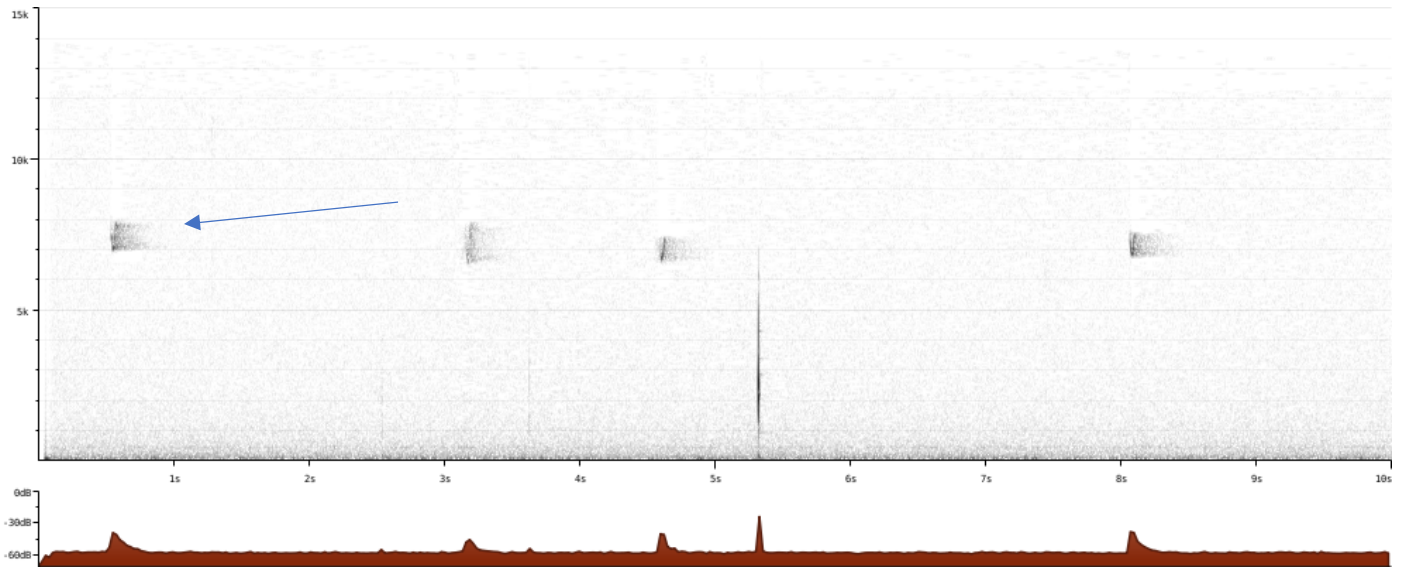
71873 Baja California 5/10/06



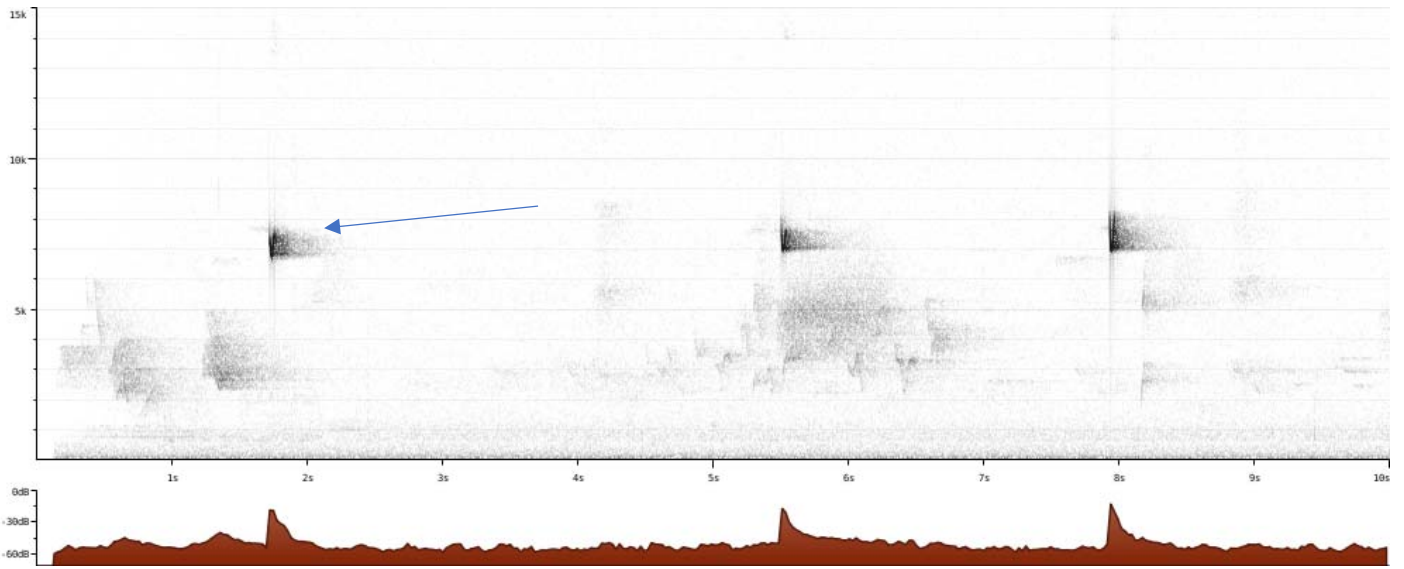
71872 Baja California 5/09/06



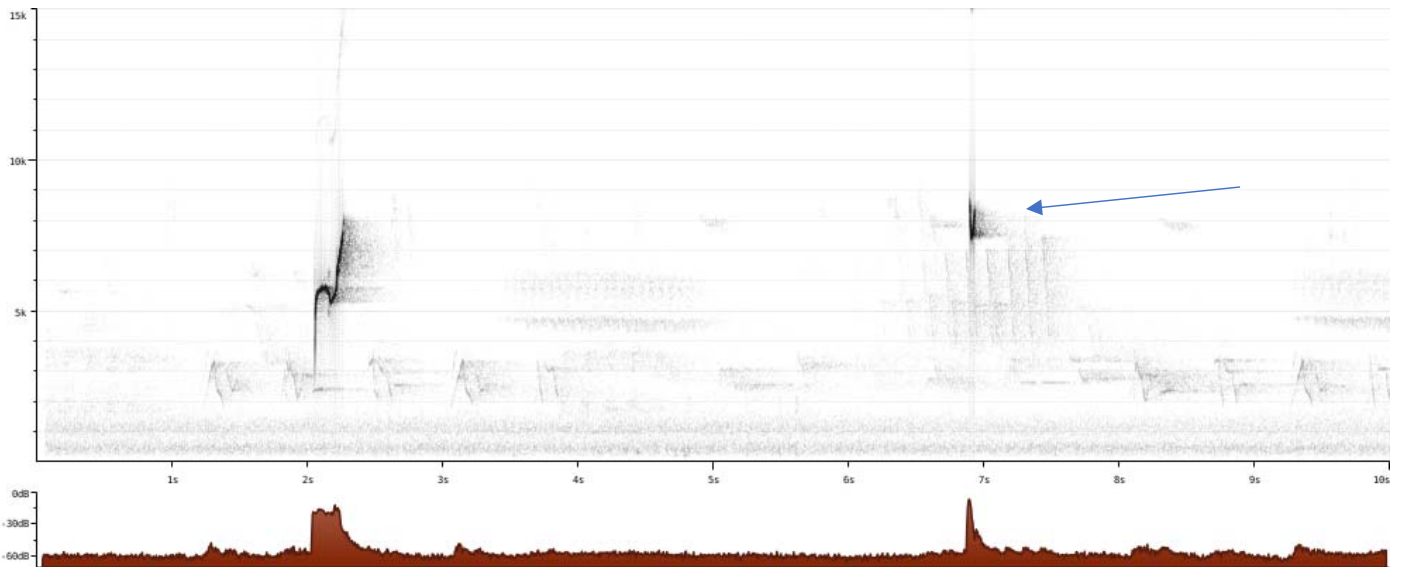
XC65992 Vancouver Island 8/21/10



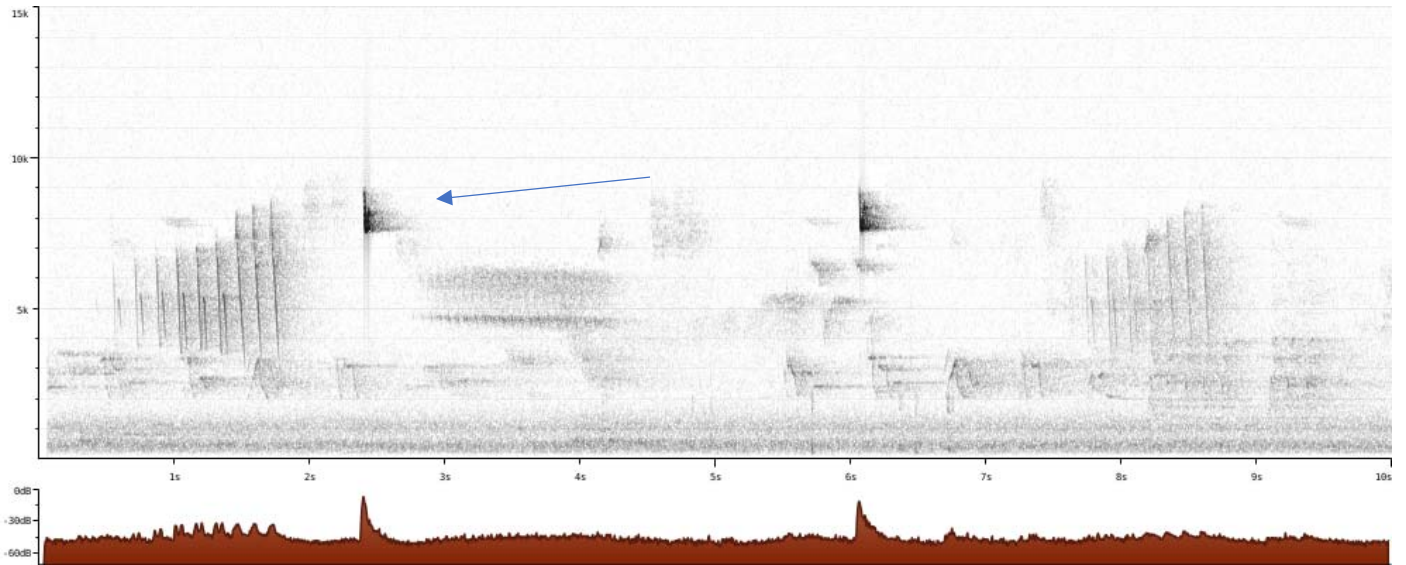
37051 King County, Wa 6/7/09



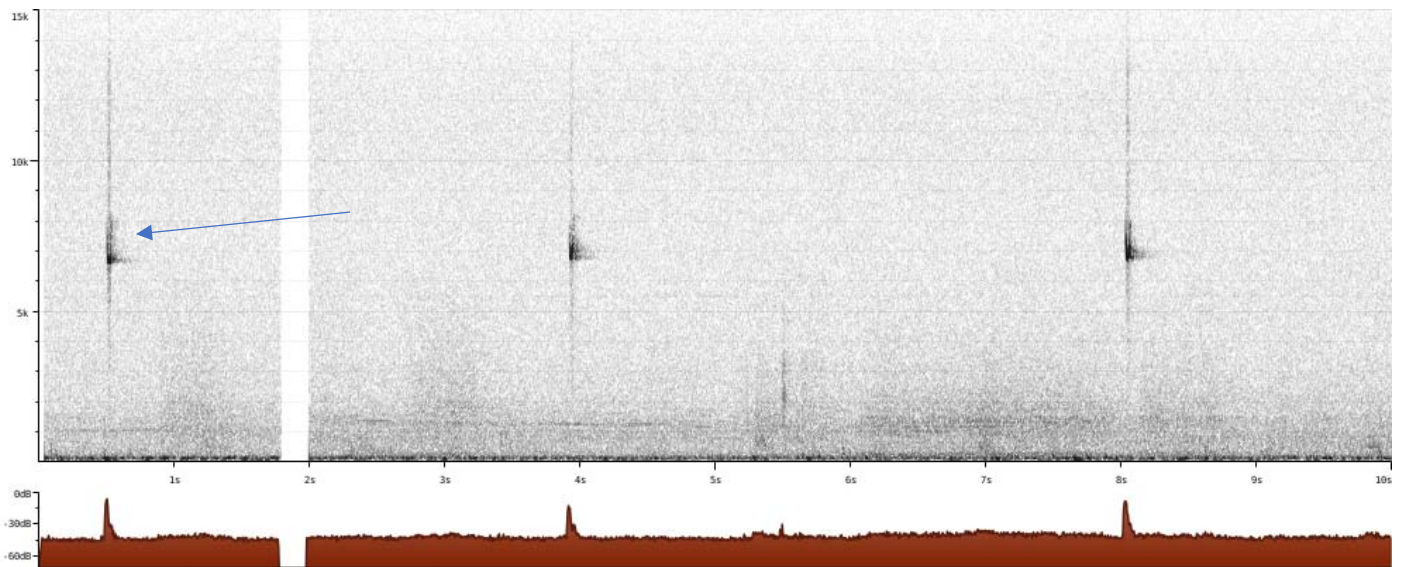
473430 Thurston County, WA 5/1/19



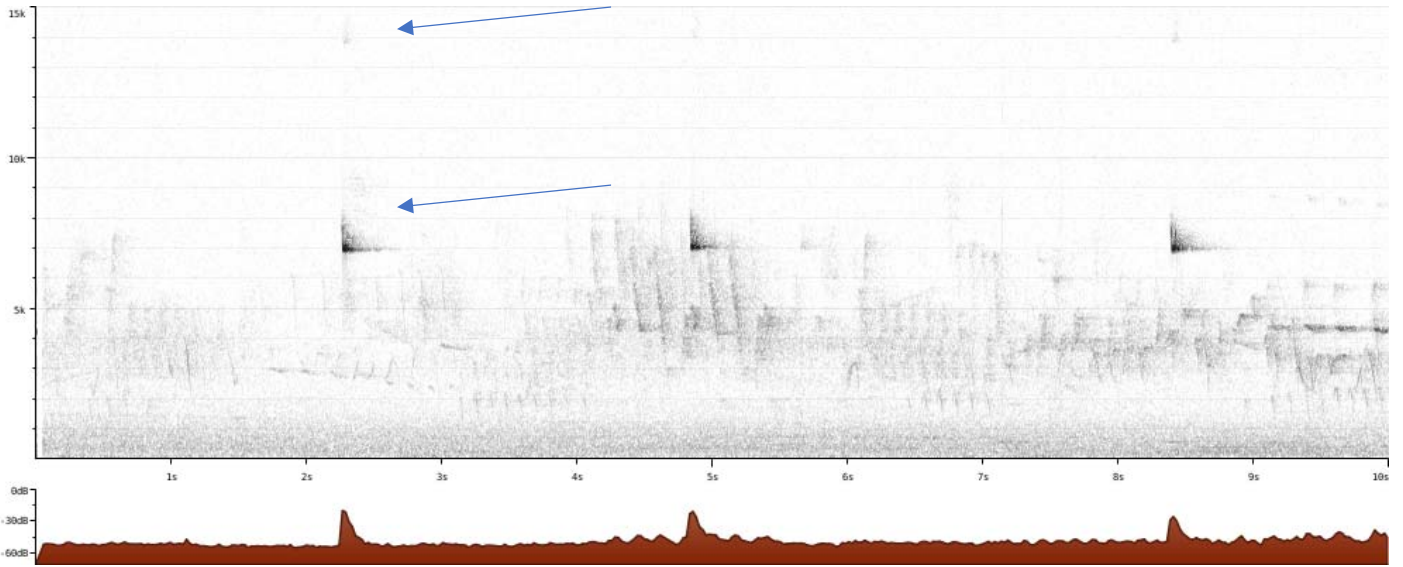
473429 Thurston County, WA 5/1/19



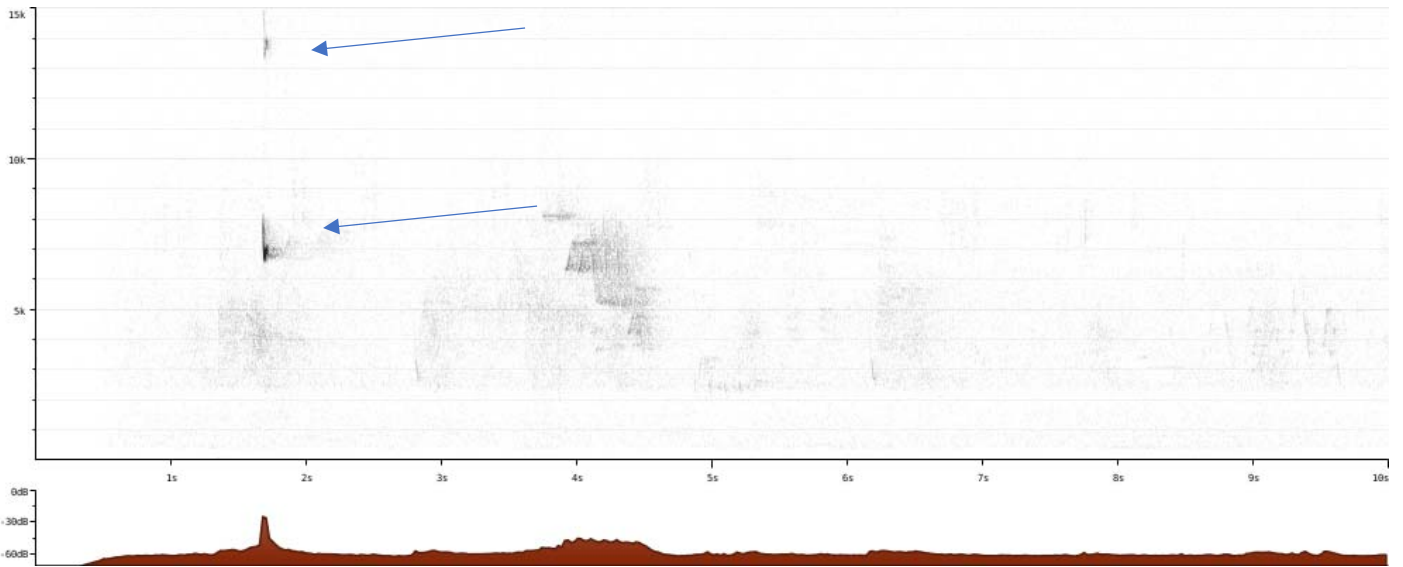
433225 Vashon Island, Washington 8/16/2018



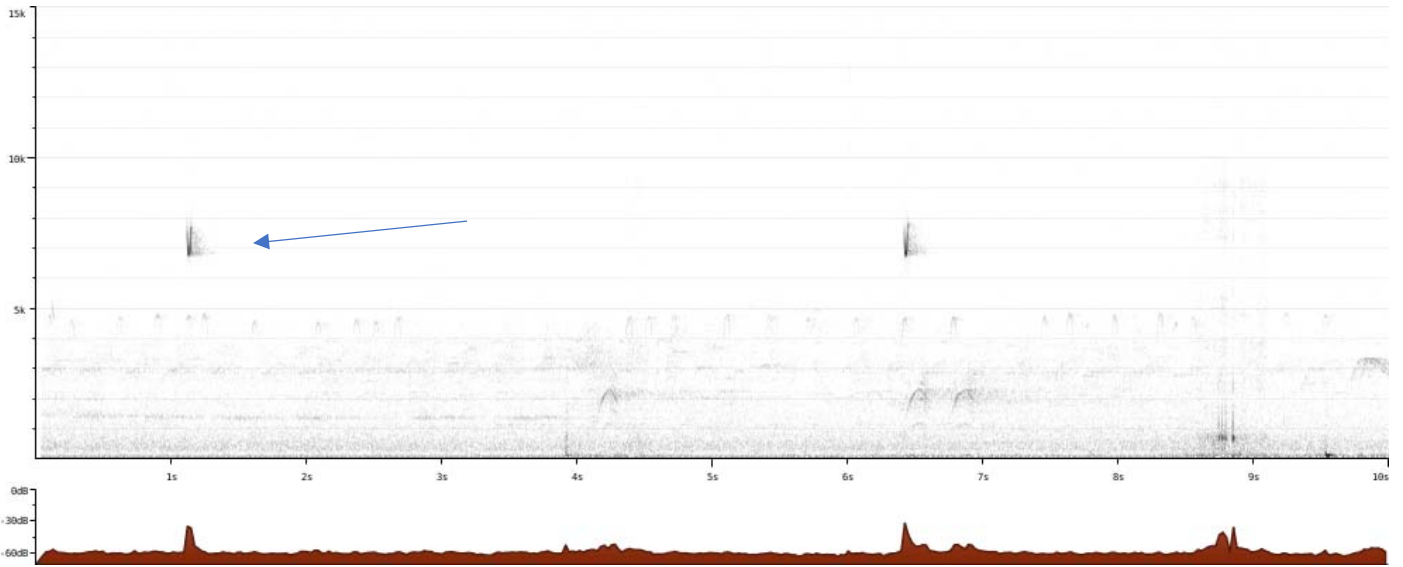
364807 – Sacramento 4/16/17



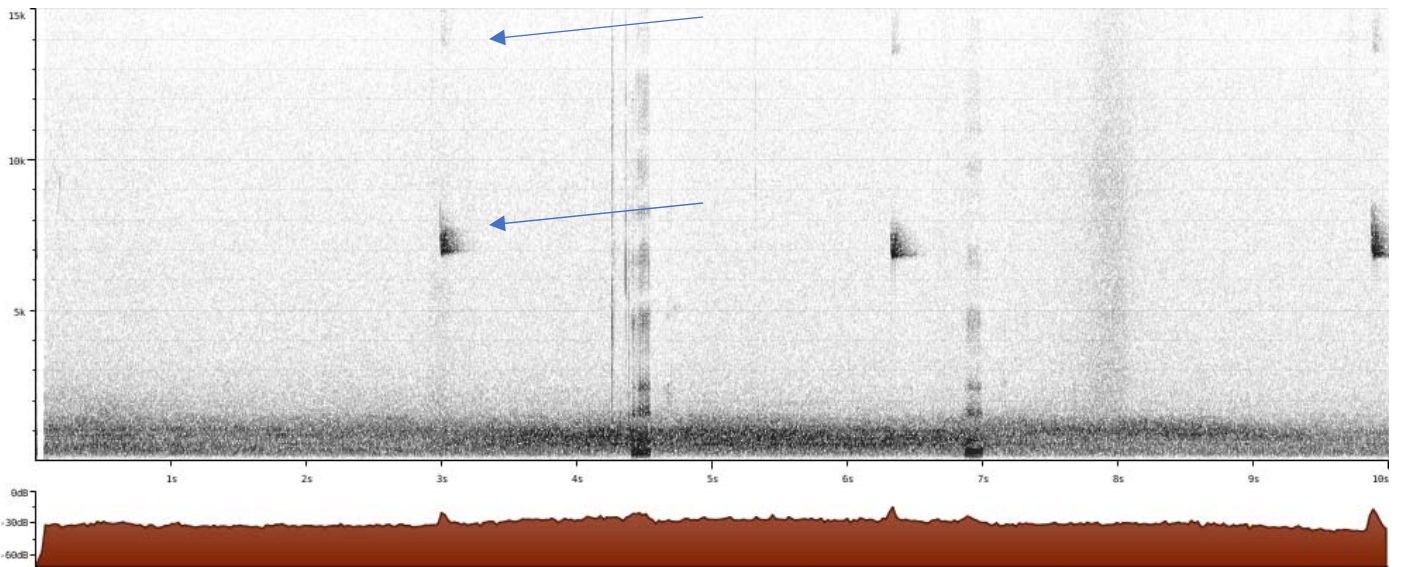
164569 – San Diego 5/6/13



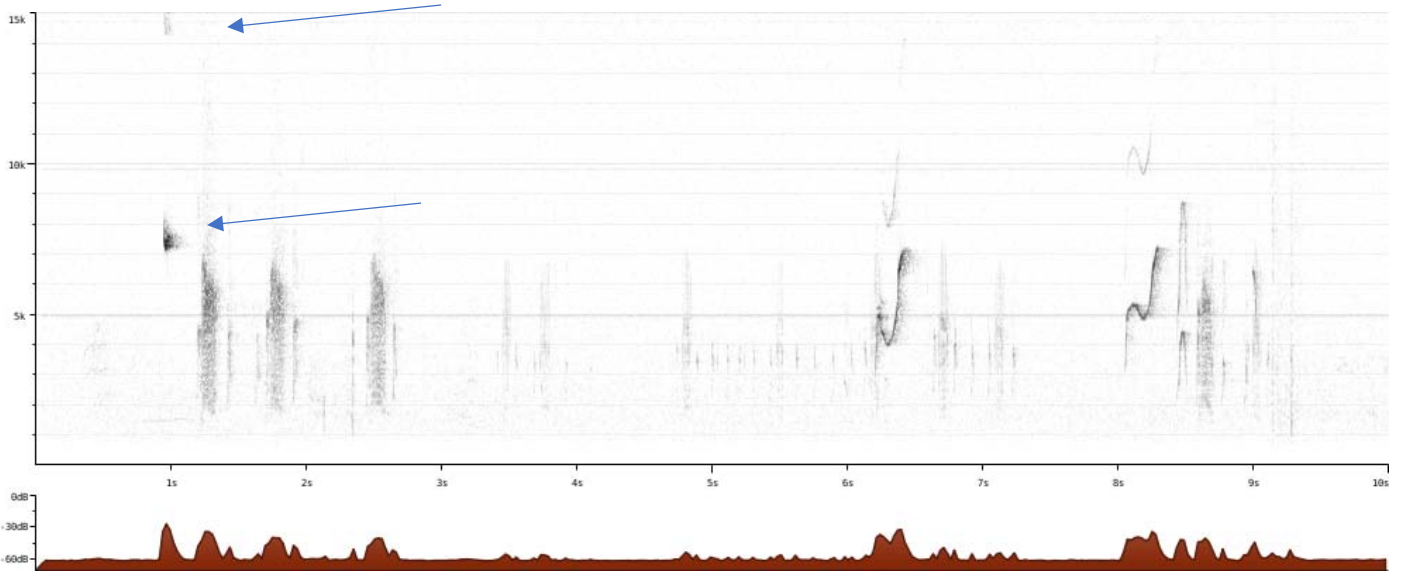
71874 Baja California 6/16/2001



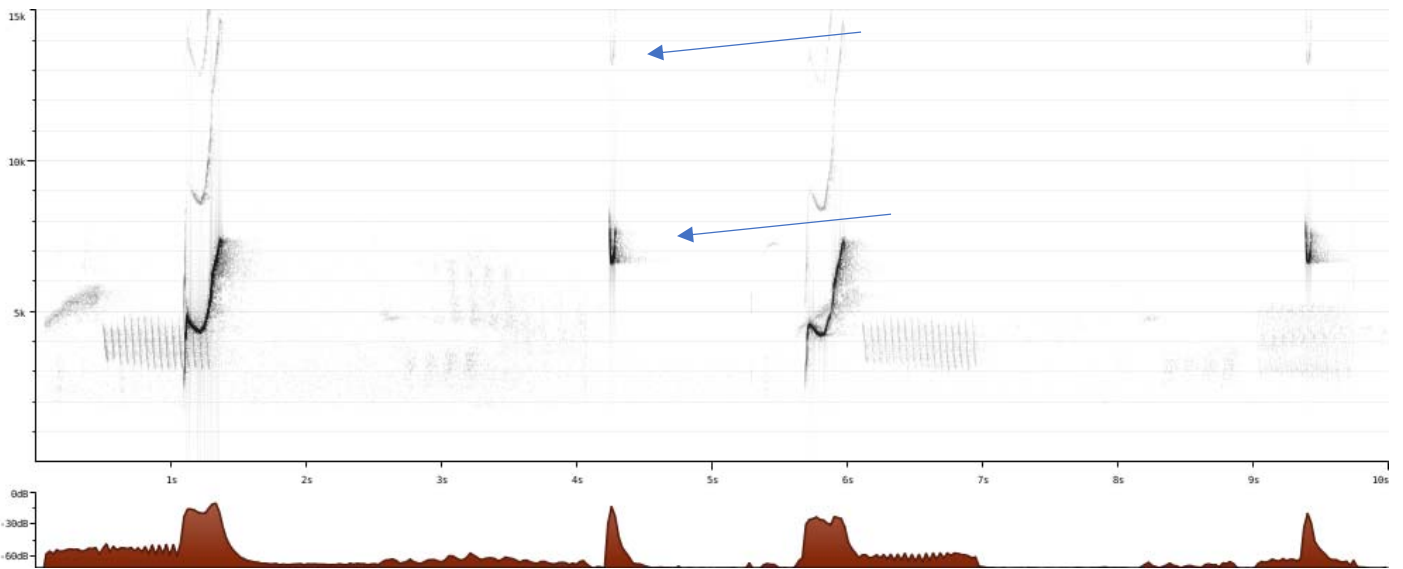
335147 Humboldt County – Sept 17, 2016



124001 Cochise County, Az 5/25/11 (male and female flycatcher together)



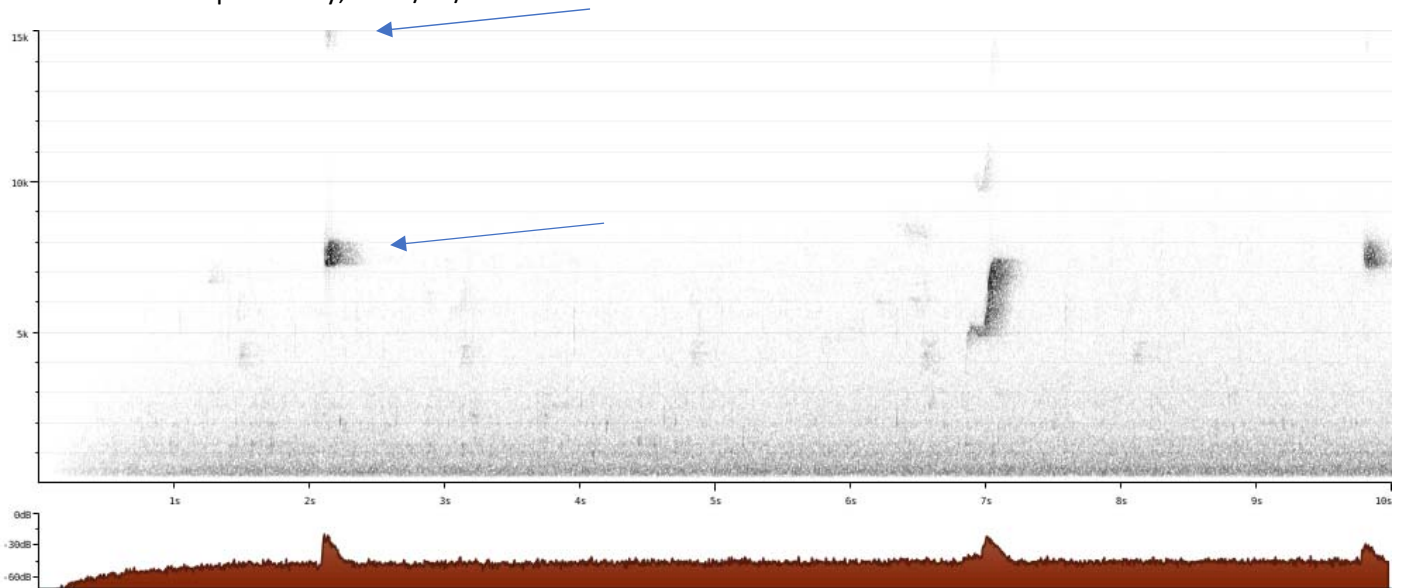
297477 Santa Cruz Island (different subspecies) 3/19/15



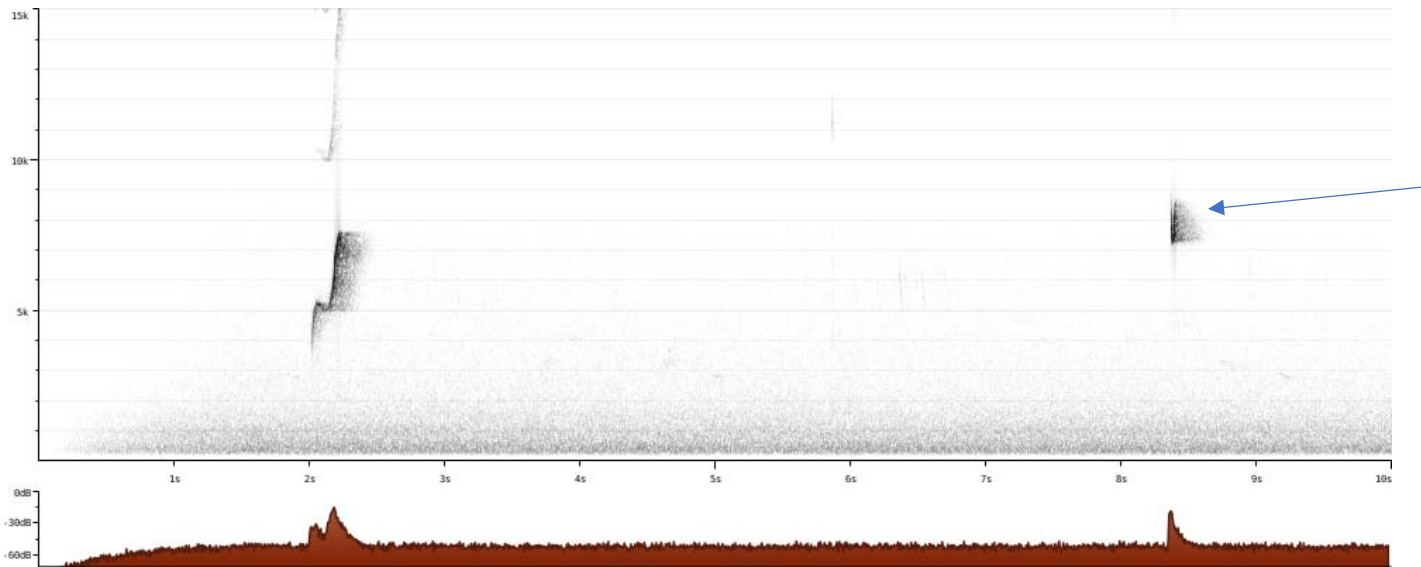
297476 Santa Cruz Island 3/19/15



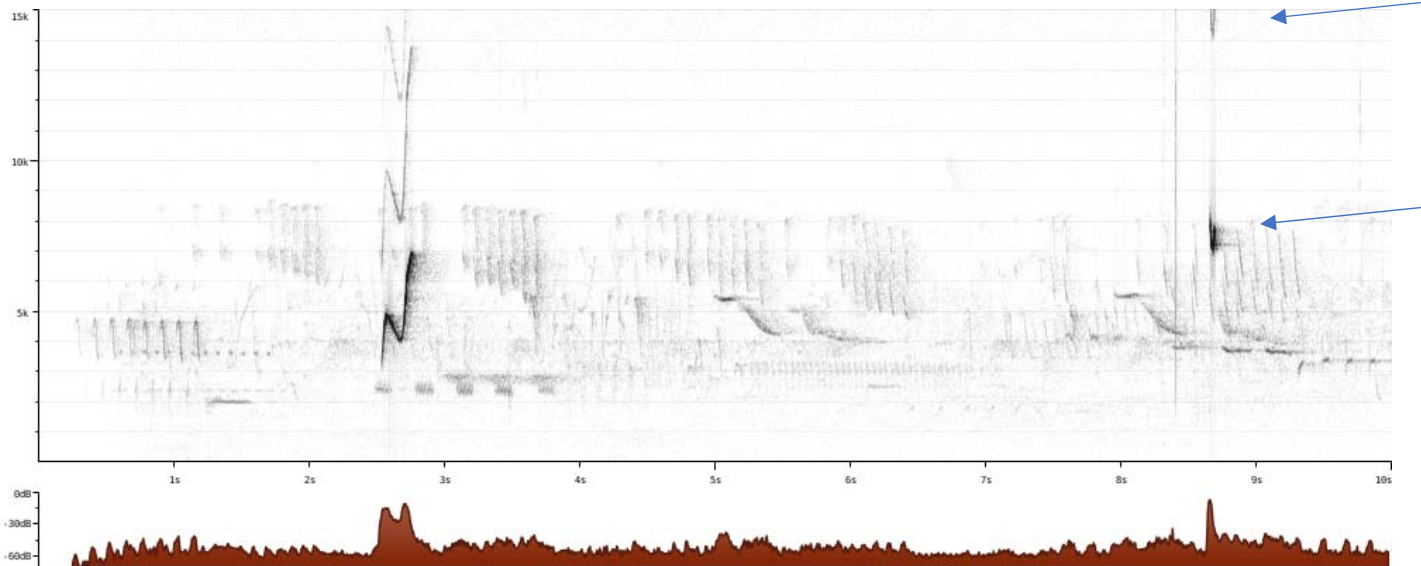
553387 San Luis Obispo County, CA 4/25/90



553386 San Luis Obispo, CA 4/25/2020



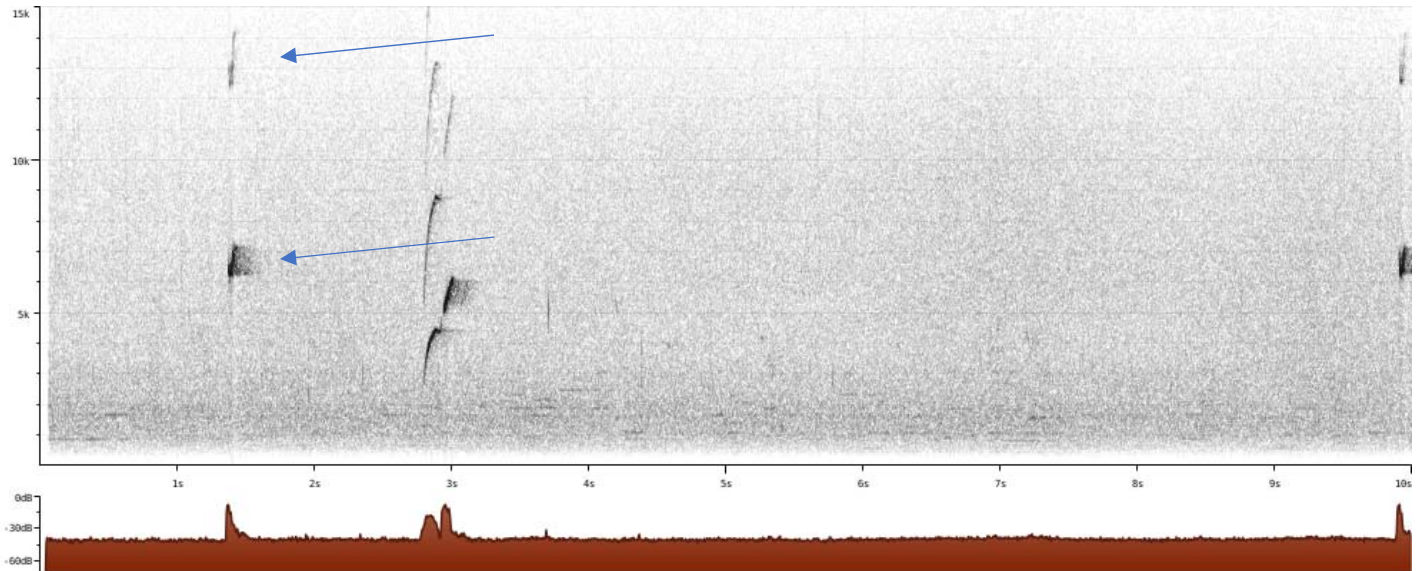
545466 San Diego, CA 4/12/2020



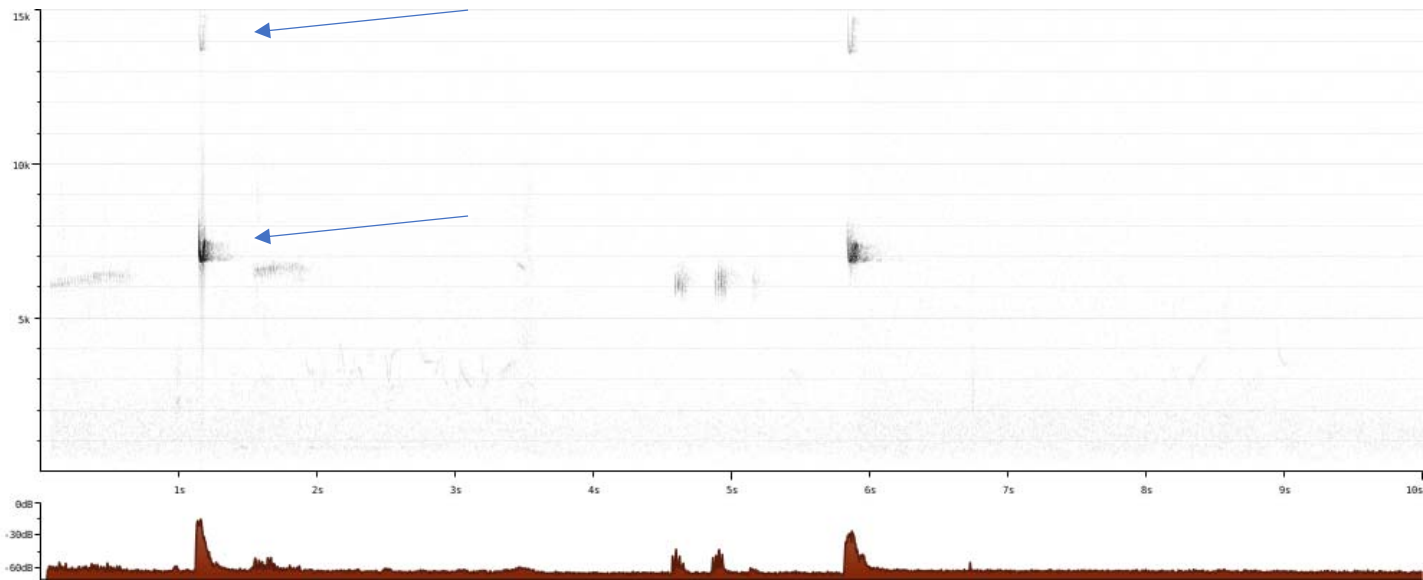
Document 3: Cordilleran Flycatcher "female" call/position notes (from xeno-canto)

Blue arrows point to the call note.

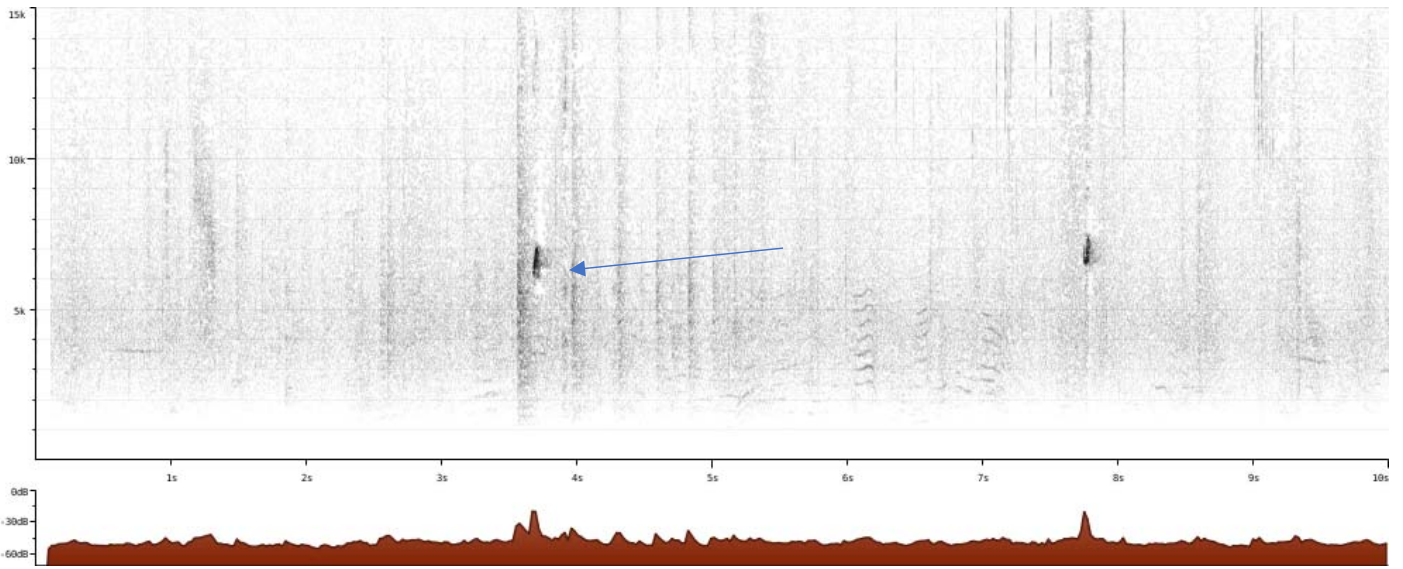
422195 – San Miguel County, Colorado 6/18/2009



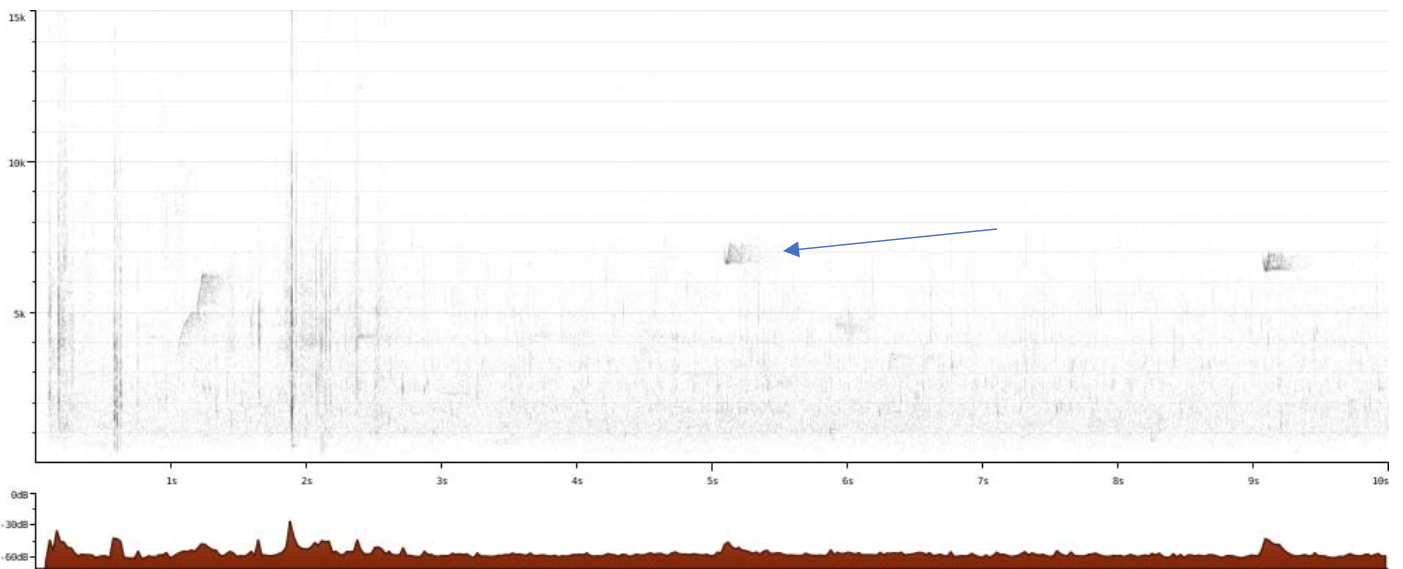
422194 – San Miguel County, Colorado 6/8/2008



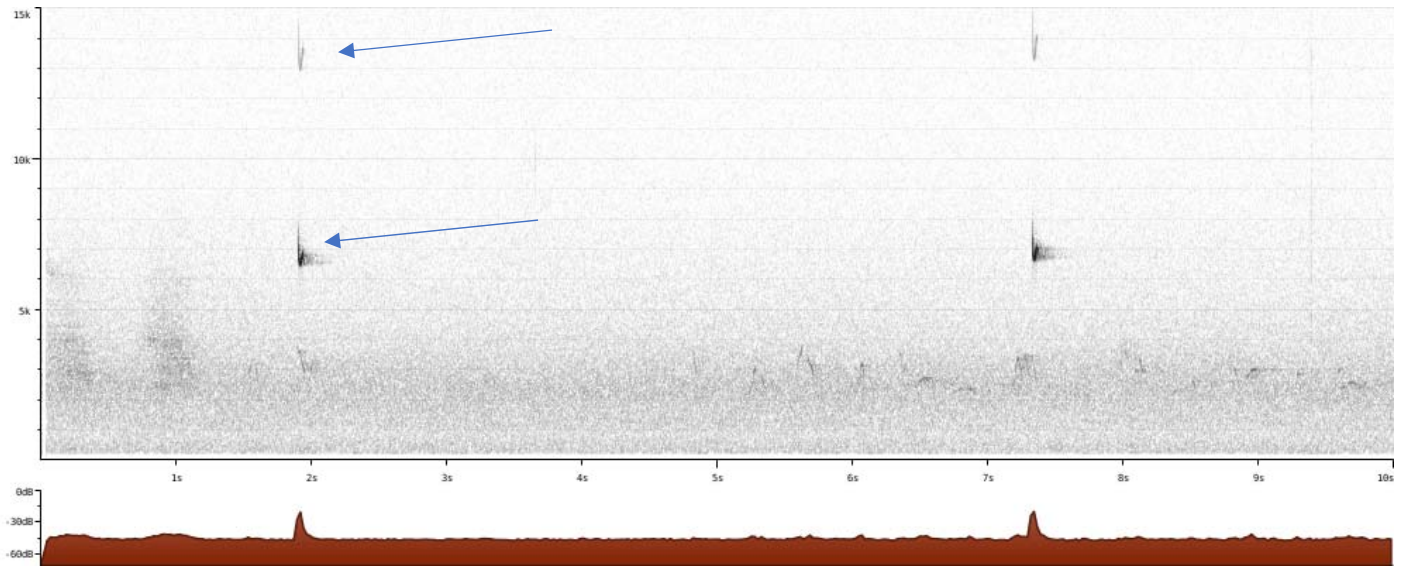
263058 – Larimer County, Colorado 7/10/2015



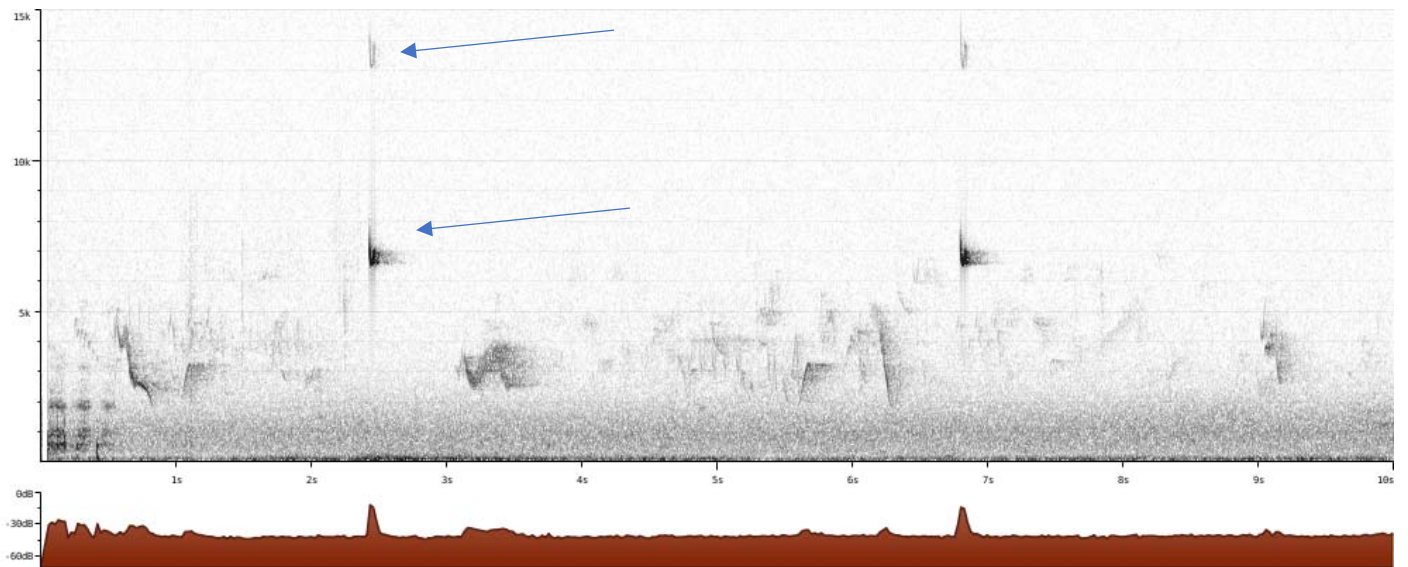
322296 – Larimer, Colorado 6/16/2016



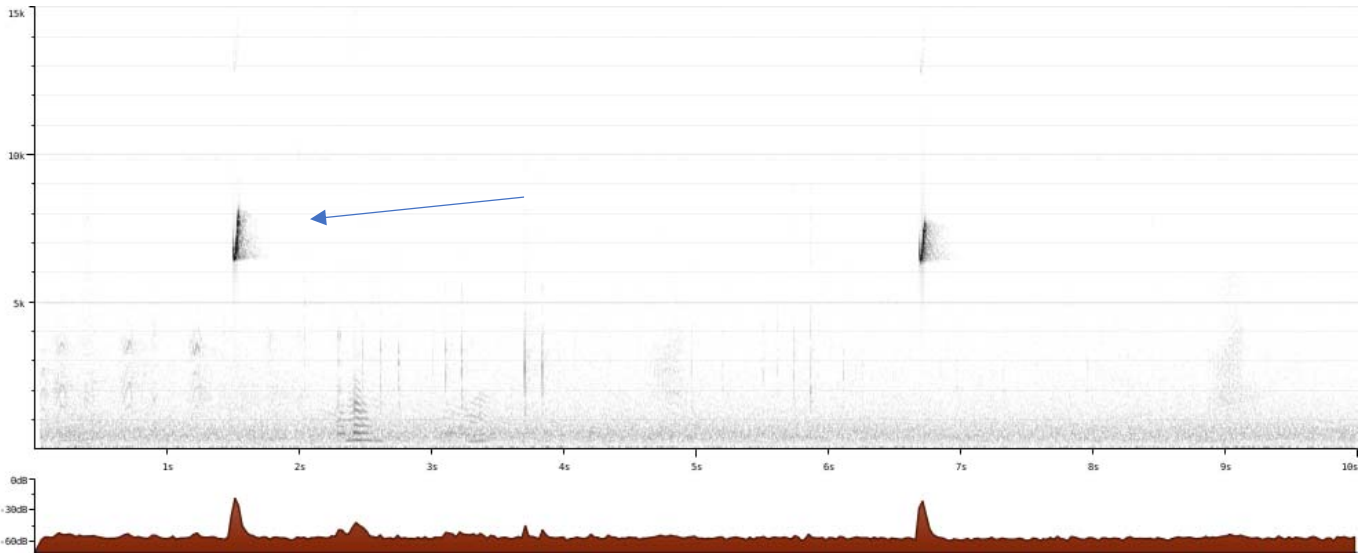
374103 Custer County, Colorado 6/2/2017



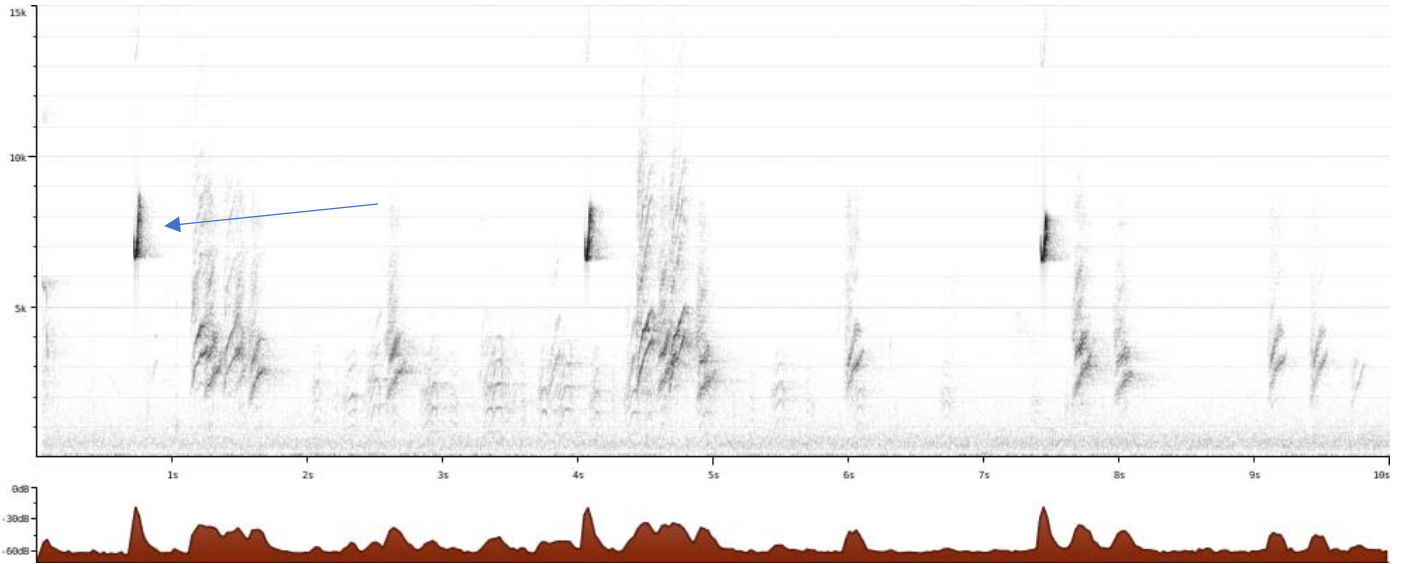
317967 Cochise County, AZ 5/21/2016



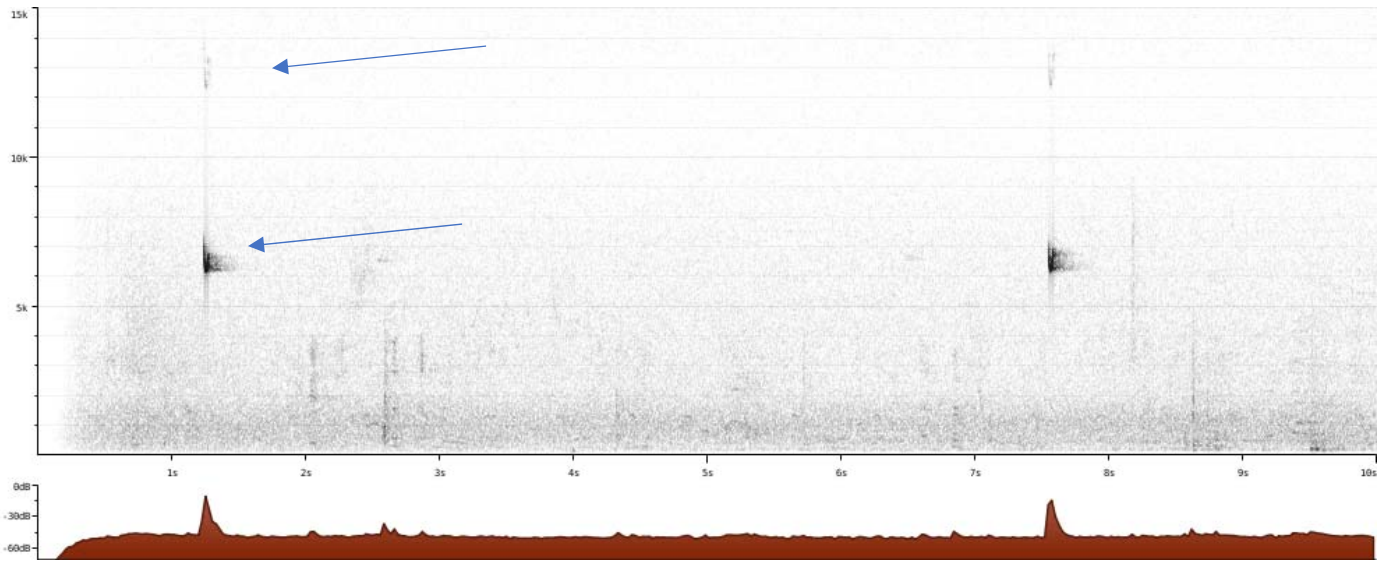
XC123610 – Cochise County, Arizona, 6/26/2011



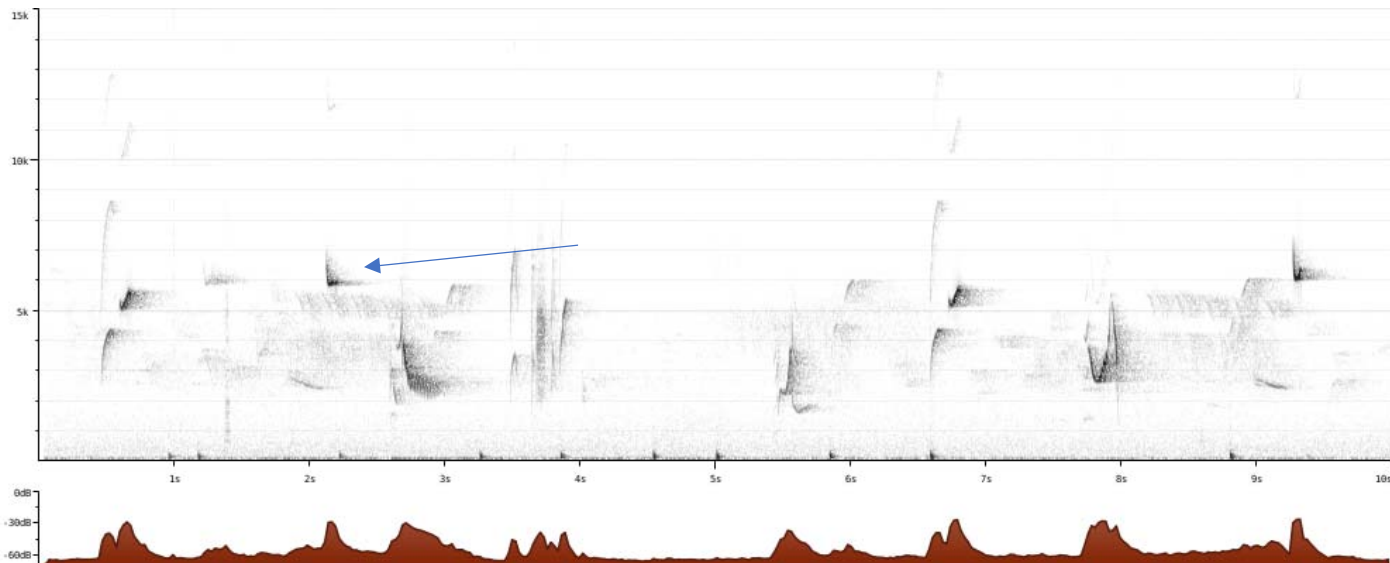
123611 – Cochise County, Arizona 6/26/2011



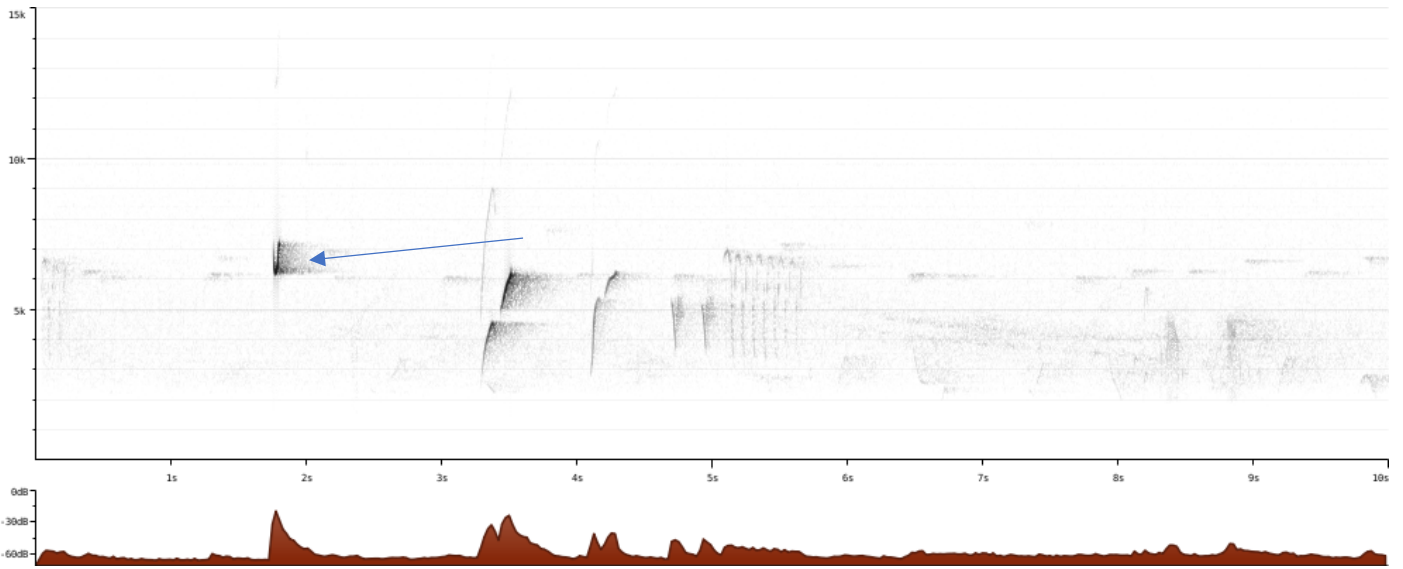
80680 – Pima County, Arizona 5/14/2011



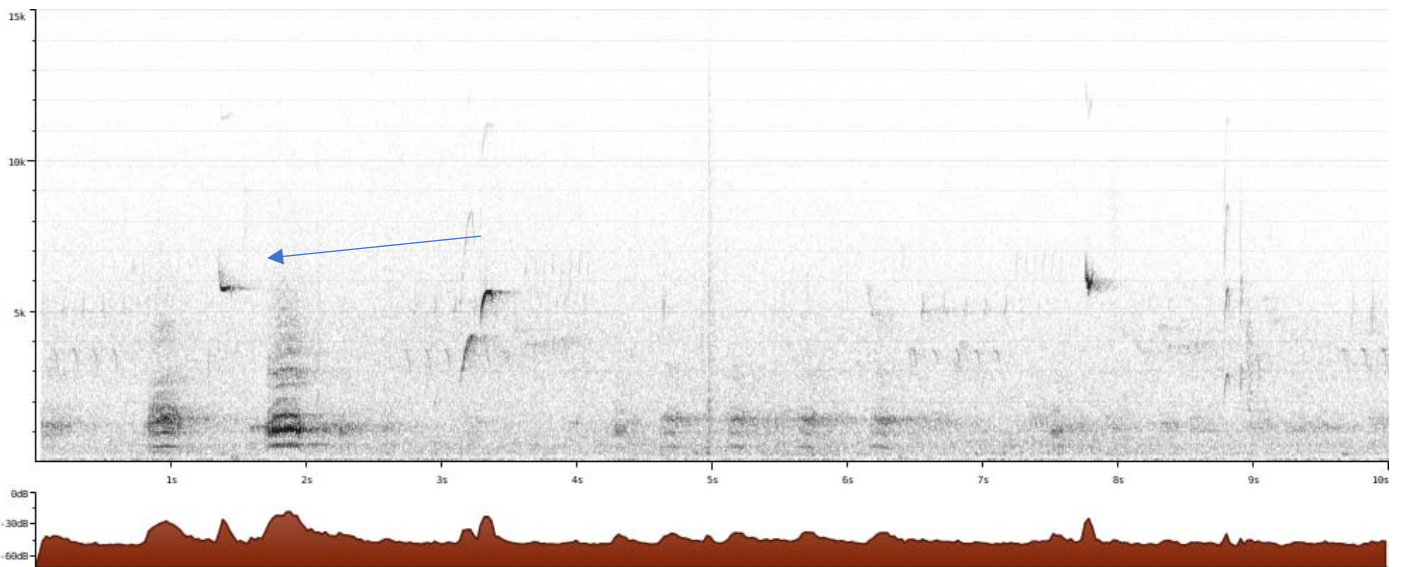
123656 Cochise County, Arizona 5/14/2009



123655 – Cochise County Arizona 6/27/2009



123654 – Chiricahua Arizona 6/12/2012



123624 Chiricahua Arizona 5/20/2010

