xeno-canto

Identification of some Brazilian elaenias by voice

Por Jeremy Minns

diciembre 13, 2018

In this article I deal with eight species of elaenia that are common in Brazil but are not restricted to this country. I have examined the recordings of these species on xeno-canto, the Macaulay Library and WikiAves. The sound types I describe do not constitute the full repertoire of each species but include only those most commonly heard and which serve for identification. I have ordered the species by ease of identification rather than by taxonomy.

The elaenias are considered amongst the most challenging groups of birds to identify. 'Notoriously difficult, the elaenias represent perhaps the most confusing tyrannid group...It will The elabelities are considered antidings the inter containinging groups of binds to benefity. However, the containes represent portage into most containing represent portage in the field of some elaenias in the field. (Ridgely and Tudor, volume II. 1994). In these circumstances vocalizations assume greater than normal importance. But if identification in the field of some species is uncertain and we have few cases of birds that have been recorded and then collected, how can we be sure that a particular sound type belongs to to one of these problematical species? The answer can be obtained from a combination of two factors: the distinctiveness of the morning songs of the elaenias and the range of each species. My reasoning is as follows:

The ranges of the eight elaenias which are the subject of this article are those in Ridgely and Tudor (1994). Ridgely based his work on the examination of museum specimens with the addition of some reliable visual records (Ridgely and Tudor, volume I). In the last few years extensive collections of sound recordings have been built up and it is now possible to plot the geographic distribution of certain distinctive songs. It is reasonable to suppose that a specific song is not emitted by two different species. Therefore, if the range of a species established from museum specimens coincides with the distribution of a certain song type, we can be confident that this is the species' song. The final step is to establish which calls are associated with each song and in this way the species' repertoire can be built up.

Yellow-bellied Elaenia (E. flavogaster)

This is the easiest of these elaenias to identify visually and its limited vocal repertoire is well known, being consistent throughout its wide range which extends from Central America to Argentina. The species' four principal vocalizations are:

Sound Type 1 dawn song. Almost always given at or before dawn but occasionally later in the morning. This song, unique to the species, is made up of short 2-note phrases and longer 4-note phrases. The 4-note phrase is in fact the 2-note phrase with the addition of two notes, one long the other short. The phrases are given at 1-3 second intervals at a measured pace. The song may consist entirely of short phrases, long phrases or - more usually - a mixture of both. Typical examples are XC288218, XC346338 and XC70827.

XC288218 🛓	🐵 🛈 🗞 🎯 xc346338 🛓	©���@ xc70827 🛓	ତେଡେଡ
play	play	play	
pause	pause	pause	
stop	stop	stop	
0:00	0:00	0:00	
1:44	0:40	1:08	
Yellow-bellied Elaenia (Ela	enia flavogaster) · song Yellow-bellied Elaenia (El	aenia flavogaster) · song Yellow-bellied Elaenia (Elae	nia flavogaster) · dawn song
Jerome Fischer	Juha Honkala	Daniel Lane	

ST2 call. A single, overslurred, burry note, 0.5-1.0 sec long. This call is highly characteristic. I know no other species with a similar call. Examples are XC287871, XC169866 and XC103595. This call is often a component in the ST3 day song and ST4 duet.

XC287871	© 🛈 😒 🛈 xc169866 🛓	©€\$© xc103595 🛓	©€€∋
play	play	play	
pause	pause	pause	
stop 0:00 0:05	stop 0:00 0:22	stop 0:00 0:19	
Yellow-bellied Elaenia (E	Elaenia flavogaster) · call Yellow-bellied Elaenia (Elae	enia flavogaster) · song Yellow-bellied Elaenia (Elaenia	a flavogaster flavogaster) · Call
Jerome Fischer	Roney Assis Souza	Jeremy Minns	

ST3 day song. A series of single burry notes and short, double 'squelchy' notes, given by a single bird. Examples are XC82909 and XC440674.

XC82909 🛓	🐵 🛈 🕲 🗉 xC440674 🛓	© () (\$)
play	play	
pause	pause	
stop 0:00 0:13 Yellow-bellied Elaenia (Elae Sidnei S. dos Santos	stop 0:00 0:08 enia flavogaster) • Song Yellow-bellied Elaenia (Elae Jeremv Minns	enia flavogaster flavogaster) · song

ST4 duet. This is the vocalization most commonly heard. It is a long jumble of notes that is difficult to describe but easy to recognise. Sometimes there seem to be two birds giving the ST3 song, simultaneously but out of sync. At other times one bird gives the ST3 song, interspersed by single notes given by a second bird. Occasionally a third or fourth bird may be involved. Examples are XC353092, XC243470 and XC440675.

XC353092 🛓	© 🖲 🕲 xc243470 🛓	© 🛈 😒 🗵 xC440675 🛓	ତେର୍ଭ
play	play	play	
pause	pause	pause	
stop 0:00 0:07	stop 0:00 0:09	stop 0:00 0:09	

Yellow-bellied Elaenia (Elaenia (Elaenia flavogaster) · song Yellow-bellied Elaenia (Elaenia flavogaster) · song Yellow-bellied Elaenia (Elaenia flavogaster) · duet Jeff Norris Eric DeFonso Jeremv Minns

Brazilian Elaenia (Elaenia obscura sordida)

In this article I cover only the subspecies sordida of Highland Elaenia (E. obscura), which is the taxon that occurs in Brazil. It is treated as a species by the HBW, with the English name Brazilian Elaenia, but has not yet been split by the IOC, whose taxonomy XC follows. The nominate subspecies does not occur in Brazil.

Brazilian Elaenia is distinguishable in the field visually from the other elaenias of this article and it is also distinctive vocally. Its principle vocalizations are:

ST1 dawn song. Usually given in the early morning but sometimes a little later. This song, distinct from that of any other species, is a series of short (about 0.5 s long) phrases, each consisting of a clear, whistled note followed by two burry notes. There are clear notes between the burry notes and after the second one, which are visible in the sonogram but are not distinguishable to the ear. The phrases are given at regular intervals of 2-3 secs. Typical examples are XC337456 and XC81541.

XC337456 🛓	©🛈 🕲 🗴 🖾 🖄	© ! \$0	
play	play		
pause	pause		
stop 0:00 1:33	stop 0:00 0:27		
Highland Elaenia (E Jerome Fischer	Ilaenia obscura sordida) • song Highland Elaenia (Elaen Jeremy Minns	nia obscura sordida) · ST1 song	
ST2 call. A shorter longish, irregular in		r, whistled note followed by a single burry note. XC332300 and XC351024 are typical. It is give	n at
XC332300 🛓	©€\$© xc351024 ¥	$\Theta \odot \odot \odot$	
play	play		
pause	pause		
•	stop 0:00 0:16 Iaenia obscura sordida) · ST2 call Highland Elaenia (E	laenia obscura sordida) · ST2 call	
Jeremy Minns	Jeremy Minns		
ST3 trill. A short (0	.3-0.5 s) trill. XC49362 and XC332193 are examples.		
XC49362 🛓	🐵 🖲 🕲 xC332193 🛓	© 1 80	
play	play		
pause	pause		
stop 0:00 0:02	stop 0:00 0:08		

Highland Elaenia (Elaenia obscura) · song Highland Elaenia (Elaenia obscura sordida) · ST3 trill Rosendo Fraga Jeremy Minns

ST4 whine. A drawn out, nasal note, that may be single (XC23372) or in a series (ML39147, ML179790 in the first 13 secs and later).

хс23372 🛓 ©•\$=

play pause stop 0:00 Highland Elaenia (Elaenia obscura) · call Fernando Jacobs

Plain-crested Elaenia (E. cristata)

This species does not have a stereotyped dawn song, unlike most other elaenias, but throughout the day it utters a 'song' which consists of different song elements, given at a measured pace and at approximately equal intervals. In XC272543, for example, five different song elements appear.



pause stop 0:00 1:19 Plain-crested Elaenia (Elaenia cristata) · song Peter Boesman

The song elements most frequently heard are:

ST1 3-note phrase. A short trill is followed by an emphatic burry note and then by a shorter burry note. Each note is at a slightly higher pitch than the preceding note. The rhythm is characteristic. See XC81533 (first, fourth, sixth, eighth and tenth phrase. To hear the examples of this sound type, click below on the catalogue number of the recording and then on the the times in 'Remarks from the Recordist'), XC329825 (second, third and fourth phrase etc., recorded at 15:12 in the afternoon) and XC81199 (second, fifth and sixth phrase etc.).





pause



pause

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play pause

stop	stop	stop
0:00	0:00	0:00
0:21	1:43	0:25
Plain-crested Elaenia (Elaenia cristata cristata) ·	Dawn song Plain-crested Elaenia (Elaenia cristata) · song Plain-crested Elaenia (Elaenia cristata cristata) · Dawn song
Jeremy Minns	Jeremy Minns	Jeremy Minns

ST2 quick trill. Five or six notes, descending in pitch and accelerating in pace, with each note shorter than the last, until the last longer note. This can be seen clearly in the sonogram. See XC3963, XC81531 (first, fourth, seventh and ninth phrase) and XC272544 (second, fifth and sixth phrase etc.).

хсз96з 🛓	© 🛈 🗞 🛈 xC81531	4 @	0 🔊 🕲 🗴 xc272544	4 ©0\$9
play	play		play	
pause	pause		pause	
stop 0:00 0:27	stop 0:00 0:56		stop 0:00 0:42	
Plain-crested Elaenia (Elaen	ia cristata cristata) · call? Plain-cres	ed Elaenia (Elaenia cristata cris	,	, , , ,
Nick Athanas	Jeremy Min	IS	Peter Boesn	nan
ST3 slow trill. Slower than ST2, level pitched and ending with a longer, descending note or notes. See XC81530 and XC33415.				

XC81530 🛓	🐵 🛈 😒 🕲 xc33415 🛓	©()(\$)=	
play	play		
pause	pause		
stop ^{0:00} 0:10 Plain-crested Flaenia (F	stop 0:00 0:03 Iaenia cristata cristata) ∙ Call Plain-crested Elaenia	(Flaenia cristata) . call	
Jeremy Minns	Marcos Melo		
ST4 descending call.	One to five slow notes, descending in pitch. See X	C81534, XC146803 and XC202508.	
XC81534	©€\$© xc146803 🛓	©€\$© xc202508 ¥	©•\$=
play	play	play	
pause	pause	pause	

stop 0:00 0:29 0:00 1:16 0:00 0:05 Plain-crested Elaenia (Elaenia cristata cristata) · Call Plain-crested Elaenia (Elaenia cristata cristata) · call Plain-crested Elaenia (Elaenia cristata) · song Jeremy Minns Andrew Spencer Hans Matheve

ST5 quick level trill. There are few recordings of this call. See XC272538 and ML68484, where it appears with ST1.

stop



©(•)(\$)=

play pause

stop 0:00

Plain-crested Elaenia (Elaenia cristata) · dawn song

Peter Boesman

Plain-crested Elaenia is identifiable in the field and can be distinguished from other sympatric elaenias with confidence. There is no reason to believe that the large body of recordings of the above sound types have been wrongly attributed to this species.

Lesser Elaenia (E. chiriquensis)

Restricted to savanna / cerrado habitat, its range overlaps partially with those of Large, Plain-crested, Small-billed and Chilean Elaenia. When seen well it is separable in the field from all these species. Two of its vocalization types are diagnostic, but the ST3 whistle is not.

ST1 dawn song. Usually given at dawn but sometimes later in the morning or even in the late evening. Unique to the species. There are two components to the distinctive song of Lesser Elaenia: a short phrase and a long phrase. The short phrase is a quick double note, the long phrase is the short phrase followed by two or three quick lower pitched notes and a final higher pitched note. In ML69888 the long phrase is preceded by several short phrases. In XC18520 and XC246362 the song consists only of the long phrase.

stop

XC18520 🛓	🞯 🛈 🕲 🖻 XC246362 🛓	@ ! @
play	play	
pause	pause	
stop	stop	
0:00	0:00	
0:19	0:09	
Lesser Elaenia (Elaer	nia chiriquensis) · song Lesser Elaenia (Elae	enia chiriquensis albivertex) · dawn song
Robson Silva e Silva	Niels Krabbe	

. The sound of th



play pause stop 0:00 0:19 Lesser Elaenia (Elaenia chiriquensis albivertex) · Song Jeremy Minns

ST3 whistle. This is a short, overslurred whistle, showing in the sonogram as an inverted 'V' or 'U'. It is the first elaenia vocalization that we have met that does not provide a clear ID. Both Large Elaenia (*E. spectabilis*) and Chilean Elaenia (*E. chilensis*) have a single note whistled call. I shall deal with the differences between these whistles below. Meanwhile, examples of whistles that are almost certainly by Lesser Elaenia are XC345324, WA1842549, WA1804965, WA1566228 and WA72161. In these recordings the whistle and the chibum call appear in the same cut. In ML69890 the whistle is heard with a twilight song. [WAxxxxx recordings can be found on www.wikiaves.com.br/xxxxx]

XC345324 🛓



play pause stop

stop 0:00 0:48

Lesser Elaenia (Elaenia chiriquensis albivertex (ssp assumed from location)) · song Jeremy Minns

ST4 buzzy call. This is a rarely recorded single note call. Examples are WA1548629 and WA2809507. On WA2809555 there is a good photo of the bird in the latter recording.

Large Elaenia (Elaenia spectabilis)

This species is distinguishable in the field from other elaenias by its large size. The most frequently heard vocalizations are:

ST1 dawn song. Unique to the species. Usually given in the early morning, rarely later in the day. A 3-syllable phrase repeated at regular 2-3 sec intervals. See XC70516, XC49364.

XC70516 🛓	© 🛈 🕲 🗴 🖾	ତାନ୍ତ୍ର
play	play	
pause	pause	
stop 0:00 1:07	stop 0:00 0:17	
•	nia spectabilis) · Song Large Elaenia (Ela Rosendo Fraga	aenia spectabilis) · song
Large Elaenia (Elaer Bernabe Lopez-Lanus	nia spectabilis) · Song Large Elaenia (El Rosendo Fraga	aenia spectabilis) · song

ST2 'wheeo' call. This is a descending, slightly underslurred 'wheeo' note, often preceded by a quiet explosive note that appears in the sonogram as a vertical line. See XC176957 and XC207894. It is variable, even in the same region, being sometimes longer, sometimes shorter. In northeastern Brazil this call is a little different, being slightly over-rather than underslurred. See XC1081, XC6158 (at 7.5 secs) and WA2834939. This form of the call is reminiscent of Small-billed Elaenia's ST3 call, but there should seldom be doubt as to the ID as Small-billed Elaenia is rare in northeastern Brazil and the two species are visually separable.

XC176957 🛓	©®®0	XC207894 🛓	©®®0	XC7081	©•\$=
play		play		play	
pause		pause		pause	
stop 0:00 0:09		stop 0:00 0:12		stop 0:00 0:24	
Large Elaenia (Elaenia	spectabilis) · song		a spectabilis) · cal		ia spectabilis) · call
Cleberton D. Bianchini		Robson Silva e Silva		Glauco Alves Pereira	
XC6158 🚢	©•••=				
play					
pause					
stop 0:00 0:21 Large Elaenia (Elaenia <i>Ciro Albano</i>	spectabilis) · song				
	nd 44 secs). As thi				iee XC163532 (at 8.5 secs), XC148699, XC71180 (from 11 secs) and n Elania, I have chosen examples where the ST1 song or ST2 or ST4
XC163532 🛓	©®®®	XC148699 🛓	©®®@	XC71180	©•\$=
play		play		play	
pause		pause		pause	
stop 0:00 0:22		stop 0:00 0:34		stop 0:00 2:49	

Large Elaenia (Elaenia spectabilis) · song Large Elaenia (Elaenia spectabilis) · call Large Elaenia (Elaenia spectabilis) · song Pedro Rinaldi rudy gelis Paul Donahue

ST4 rattle. ML516954, XC81552 (last 10 secs), XC52842 (at 15.5 secs).

xC81552 2 CS2842 2 Play play play play play stop stop

: ©•\$=

0:00 0:19 Carlos Elaenia (Elaenia spectabilis) - call Large Elaenia (Elaenia spectabilis) - song Jeremy Minns Carlos Ferrari

ST5 descending sequence. ML190740 (at 38 secs), WA1841464 (18-25 secs).

Small-billed Elaenia (Elaenia parvirostris)

The vocalizations that are useful for the identification of Small-billed Elaenia are:

ST1 dawn song. Usually given in the very early morning but sometimes later in the day. This is another elaenia with a stereotyped song, unique to the species, consisting of a series of 4-note phrases, transcribed by Belton (1985) as "weedable-we", given at regular intervals. See XC344289, XC81545 and XC49382 (in which there are also variations on the standard 4-note phrase). Sometimes high frequency single notes may be interposed between the phrases of the song, as in XC344289 at 10s, 16s and 20s.

XC344289 🛓	© 🖲 🕲 xc81545 🛓	©€\$@ xc49382 ¥	© • \$=
play	play	play	
pause	pause	pause	
stop 0:00 0:47	stop 0:00 0:09	stop 0:00 0:31	
Small-billed Elaenia (E Rodrigo Dela Rosa	laenia parvirostris) • song Small-billed Ela Jeremy Minns	enia (Elaenia parvirostris) · Dawn song Small-billed Elae Rosendo Fraga	nia (Elaenia parvirostris) · song
		s very similar to the ST3 call of Olivaceous Elaenia but to us Elaenia, which is lower pitched and less abrupt.	the two can be distinguished if heard well. The call of
XC49388 🛓	© 🛈 🕲 🖻 xc50922 🛓	© () (\$)	
play	play		
pause	pause		
stop 0:00	stop 0:00		
0:14 Small-billed Elaenia (E	0:13 Iaenia parvirostris) • song Small-billed Ela	enia (Elaenia narvirostris) - song	
Rosendo Fraga	Bernabe Lopez-La		
	This category covers a wide range of ca esemble the ST2 call of Large Elaenia.	lls that form a continuum. The call may be short, as in Σ	XC290056 (first three calls), or longer, as in $XC46423$
XC290056	© 🖲 🗞 🕲 XC46423 🛓	© 🖲 🕲 xC49384 🛓	©€\$∋
play	play	play	
pause	pause	pause	
stop 0:00	stop 0:00	stop 0:00	
0:18 Small billed Elaonia (E	0:22	0:15 enia (Elaenia parvirostris) - Feuu call Small-billed Elaenia	(Elecnic parvirectric) cong
Pedro Rinaldi	Bernabe Lopez-La		a (claenia parvirostris) · song
The descending call m	ay be so modulated that it becomes a 2-	note call, as in XC205368 and XC50917.	
. ± @0	0SO xc50917 🛓	ଭ୍ନାର୍ଭ୍ଭ	
		0000	
	play		
	pause		

pause pause stop stop 0:00 0:00 Small-billed Elaenia (Elaenia parvirostris) - song Gabriel Rosa Bernabe Lopez-Lanus

Olivaceous Elaenia (Elaenia mesoleuca)

XC205368 play

ST1 song. The song, unique to the species, is a 4-note phrase, with a pause between the first and second notes: 'wit... wit wichoo'. XC284498 and XC81540 exemplify this well. This phrase may be given at regular or irregular intervals, at any time during the day. If analysed, it is seen to be composed of four different elements. The two note 'wichoo' is always present; the 'wit calls vary and may be any of three single note sound types. For identification purposes it is the rhythm and the 'wichoo' sound type that are important rather than the precise sound of the 'wit' call.

 XC284498
 Image: Constraint of the second second

ST2 buzzy call. This is one of the three types of 'wit' note that are components of the song but it may appear on its own, as for example in XC299733.



play
pause
stop 0:04 Olivaceous Elaenia (Elaenia mesoleuca) • song Pedro Rinaldi

ST3 pik call. This is a short, single note that appears as an inverted 'V' or 'hairpin' in the sonogram. Examples are XC81538 (see forum discussion of this recording), XC81543 (the second and fourth calls) and ML19568 (in the third cut, alternating with ST4). It is very like the ST2 call of Small-billed Elaenia (see above).

XC81538 🛓	© 🛈 🗞 🛛 xC81543	± ©•\$0
play	play	
pause	pause	
stop 0:00 0:10	stop 0:00 0:45	
Olivaceous Elaenia (Ela	aenia mesoleuca) · Call Olivaceou	us Elaenia (Elaenia mesoleuca) · Two different calls and sound of interaction
Jeremy Minns	Jeremy Mir	ากร

ST4 call. This call is highly variable. It may be a slightly longer version of the the 'pik' call, less sharp and more burry. In the sonogram it appears as an inverted 'V' with a 'tail' after the second leg. Examples are XC164699 and the first call in XC81543.

XC164699 🛓	🐵 🛈 😒 🕲 XC81543 🛓
play	play
pause	pause
stop 0:00 0:27	stop 0:00 0:45

Olivaceous Elaenia (Elaenia mesoleuca) • call Olivaceous Elaenia (Elaenia mesoleuca) • Two different calls and sound of interaction Christian Regis da Silva Jeremy Minns

gis da Silva Jeremy Minns In other cases the inverted 'V' has practically disappeared and the 'tail' is more defined, giving a diagnostic descending burry sound. This is a commonly heard call and there are many recordings on XC, ML and WA. For example XC325913, XC118643 and ML19568 (in the first cut).

©(•)(\$)(9)

XC325913 🛓	🐵 🛈 🕲 🕲 xc118643 🛓	© () \$0
play	play	
pause	pause	
stop 0:00 0:31	stop 0:00 0:40	
Olivaceous Elaenia (Ela Jeremy Minns	enia mesoleuca) · call Olivaceous Elaenia (E GABRIEL LEITE	laenia mesoleuca) • call

Chilean Elaenia (Elaenia chilensis)

This species breeds in Argentina and Chile and migrates north during the austral winter, reaching northeastern and northern Brazil (Somenzari *et al.*). This pattern is supported by the recordings on XC, ML and WA. From August to February there are 57 recordings from Argentina and Chile and 11 from Brazil and Bolivia. From March to July there are 62 recordings from Brazil and Bolivia and none from Argentina and Chile.

There are four common sound types present in these 130 recordings, of which the only one recorded in Brazil is the simple whistle (ST2).

ST1 song. A series of double notes, given at short, regular intervals, e.g. XC46419, XC1652.

XC46419 🛓	🐵 🛈 🕲 🕲 XC1652 🛓	© ® ®
play	play	
pause	pause	
stop 0:00 0:21	stop 0:00 0:49	
Chilean Elaenia (Elaen	ia chilensis) · Dawn song Chilean Elaenia (E	laenia chilensis) · call
Bernabe Lopez-Lanus	Sjoerd Mayer	

ST2 simple whistle. A short, clear, overslurred whistle. The sonogram ranges from an inverted 'V' wih a sharp apex (XC225270) to a smooth inverted arc.

XC225270 🛓	ତା୍ଚାତ
play	
pause	
stop 0:00 0:07	
Chiloon Eleonia (Eleo	nia chiloneic) cong

Chilean Elaenia (Elaenia chilensis) - song Lance A. M. Benner

ST3 modulated whistle. A modulated, burry, drawn out form of ST2. See XC309056, XC4587 and ML129371. It is similar to the ST4 call of Small-billed Elaenia.

XC309056 🛓 play ©€\$9 xC4587 🛓 ©€\$€

play

pause pause stop 0:00 0:54 stop 0:00 0:10 Chilean Elaenia (Elaenia chilensis Chilensis) · begging call Chilean Elaenia (Elaenia chilensis) · Call Cristian Pinto Aidan Maccormick

ST4 double whistle. Two ST2 or ST3 whistles, or one of each, e.g. XC53272.

XC53272 🛓	©€\$∋
play	
pause	
stop 0:00 0:12 Chilean Elaenia (El <i>Felix Vidoz</i>	aenia chilensis) - song
ST5 dawn song. A	series of downslurred two- and three-note whistles, given at regular intervals, e.g. XC449910.
XC449910 🛓	©€\$∋

play pause stop 0:00 0:27 Chilean Elaenia (Elaenia chilensis) . song Peter Boesman

How can we be sure that the songs of Small-billed Elaenia (Elaenia parvirostris), Olivaceous Elaenia (E. mesoleuca) and Chilean Elaenia (E. chilensis) are correctly attributed?

These three species cannot be reliably separated in the field. The songs generally attributed to each species are very distinct and cannot be confused but how can we be certain that these distinctive songs have been correctly assigned? The answer is to compare the geographical distribution of each song type with the range of each species. The range of Olivaceous Elaenia as shown in Ridgely and Tudor (1994) is restricted to southeast Brazil, eastern Paraguay and northeast Argentina and most of the recordings of the song of this species on XC, ML and WA were made in this area. The exceptions (XC299733, XC93406, XC93328, XC16330, ML187245 and ML187247) were made in Uruguay, a short distance outside the above area. The breeding range of Small-billed Elaenia, however, extends to Bolivia, all of Paraguay and northern Argentina (south to Buenos Aires and San Luis). There are many recordings of the song of Small-billed Elaenia from locations well outside the range of Olivaceous Elaenia, for instance ML129775 (Jujuy, Argentina), XC212721 (Salta, Argentina), XC50224 (Saladillo, Buenos Aires), XC3761 (Catamarca, Argentina), ML86540 (San Luis, Argentina). Both Small-billed and Olivaceous Elaenia move north in the austral winter, but the recordings of the song of Small-billed Elaenia in La Paz, Bolivia (ML120803) and Guyana (ML134440) are outside the non-breeding range of Olivaceous Elaenia. We can therefore be certain that the ST1 songs of Small-billed and Olivaceous Elaenia do in fact belong to those species.

XC299733	<u> <u>e</u> e e e e e e e e e e e e e e e e e </u>	хс93406 🛓	©•\$9	XC93328 🛓	©∙\$∋
play		play		play	
pause		pause		pause	
stop 0:00 0:04 Olivaceous E Pedro Rinaldi	ilaenia (Elaenia mesoleuca) · song	stop 0:00 1:09 Olivaceous Elaenia (Elaenia meso <i>José Luis Menéndez</i>	, ,	Adrián Azpiroz	nia (Elaenia mesoleuca) - Song
XC16330 볼	i ©0\$∋	XC212721 🎽	©®®0	XC50224 🎽	©€€∋
play		play		play	
pause		pause		pause	
stop 0:54 Olivaceous E Alvaro Riccetto XC3761	laenia (Elaenia mesoleuca) ⋅ song	stop ^{0:00} 2:04 Small-billed Elaenia (Elaenia parvi <i>Niels Krabbe</i>	rostris) ∙ dawn song	stop 0:00 0:33 g Small-billed Elaer <i>Miguel Angel Roda</i>	nia (Elaenia parvirostris) - song
play					
pause					
stop ^{0:00} 0:27 Small-billed B Rosendo Fraga	E laenia (Elaenia parvirostris) - call, song	ı			
	nia breeds in the southern Andes and				

tions outside the ranges of both Small-billed and Olivaceous Elaenia but there are sufficient (XC17873, XC53271, XC16005) for there to be no doubt that its song is correctly attributed.

©®®©

хс17873 🛓	©€\$© xc53271 ≚	©€\$© xc16005 🛓
play	play	play
pause	pause	pause
stop	stop	stop
0:00 1:00	0:00 0:13	0:00 1:57

 Chilean Elaenia (Elaenia chilensis) · Song Chilean Elaenia (Elaenia chilensis) · song Chilean Elaenia (Elaenia chilensis) · dawn song

 Doug Knapp
 Felix Vidoz

 Niels Krabbe

Identifying elaenia whistles

As we have seen, Large, Lesser and Chilean Elaenia all have a single whistle in their repertoire. These whistles sound very similar, with Large Elaenia's tending to be a little longer and lower pitched - compare XC108630 and XC44199 with XC59344 and XC29344.

XC108630 🛓	©€€≡	XC44199	7	©•\$=	XC5934	4 出	©€§∋
play		play			play		
pause		pause			pause		
stop 0:40 Large Elaenia (Elaenia sp Joao Menezes XC29344	ectabilis) · call, song	Adrian Eisei		a spectabilis) - call		E laenia (Elaen r Alexandre	ia chiriquensis) ∙ ?
play							
pause							
stop 0:00 0:30 Chilean Elaenia (Elaenia c	hilensis) . call						

Chilean Elaenia (Elaenia chilensis Niels Krabbe

I have attempted to quantify the differences, measuring one call from each of a number of recordings. For Large and Lesser Elaenia I have chosen only recordings on xeno-canto, WikiAves and the Macaulay Library which contain the song or a diagnostic call as well as the whistle, so as to be confident that the ID is correct. That option is not available for Chilean Elaenia as all the recordings of the whistle in these three collections contain no other sound type. The results are as follows:

elaenia whistles table

These numbers confirm the subjective impression that Large Elaenia's whistle is a little longer and lower pitched. However, if these measurements are plotted on a graph there is considerable overlap between the values for the three species:

elaenia whistles graph

If the whistle is longer than 0.3 sec and its peak frequency is below about 2500 Hz, the species is probably, but not certainly, Large Elaenia. Therefore, if you are unable to identify an elaenia visually, you need to hear its song or a diagnostic call, rather than a whistle, to make a positive identification by voice.

Conclusion

A highly respected contributor to the Brazilian ornitobr group once wrote that he had no confidence in the vocal repertoires conventionally attributed to the elaenias because of the difficulty in identifying them in the field. He maintained that the only way to establish reliable repertoires of these species was by a systematic process of recording vocalizations in the field combined with the collection of voucher specimens. Belton tackled this problem in a different way, capturing and banding individuals of Small-billed Elaenia and observing and recording them in the field. In this way he was able to prove that the ST1 and ST2 sound types did indeed both belong to Small-billed Elaenia and not to two different species (Belton. 1985). The wealth of recordings now available means that these extreme steps are no longer necessary and most vocalizations can be attributed to the correct species with a high degree of certainty.

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