# The Cornell Lab of Ornithology



The Warbler Guide App presents

# Eight Warbler Songs to Learn This Spring

In our post **How to Listen to Birdsong**, we went over how to use a system of specific descriptions to quickly understand and identify songs. By looking at Song Quality, Pitch Trend, and number of Sections, we were able to rapidly separate most songs.

As promised in that article, here are five more songs (plus the original three from the post), each of which has a diagnostic feature that is easily recognized once you apply our system. With just a little study, these songs will stand out immediately when you hear them in the field.

# Happy Warblering!

Scott Whittle & Tom Stephenson





# **Black-throated Blue**

Quality: Buzzy Pitch Trend: Rising Sections: 2







### What Is the Quality?

We can hear that this song has a Buzzy quality, and we can also see it in the Spectrogram. Each Element has a "fuzzy" quality, and that indicates a Buzz.

### What Is the Pitch Trend?

The first Section is even-pitched, but there is a significant rise in the second Section, so we consider this to be a Rising song overall.

### **How Many Sections Are There?**

We can also see that this song has 2 Sections. The first section is 3 slow, repeated Buzzy Elements, and the second section is a longer, rising Buzz.

### Conclusion

The only other songs that get close to that description are Cerulean, whose 2-Section song is really more of a Trill, and Northern Parula, which has a rising Trill with a single clear note at the end. Both of those songs are faster - Black-throated Blue's song is slow. So that means that if it's a slow 2-Section, Buzzy, Rising song, it's a Black-throated Blue.

### What Is the Quality?

This song is a mix of Buzzy and Clear Elements: notice the first two Elements are "fuzzy", then the next two are relatively straight lines, and the last is fuzzy again. So we call this Partly Buzzy.

### What Is the Pitch Trend?

The pitch has a characteristic middle-high-low-low-high pattern, which makes this song Variable (neither distinctly Rising or Falling). Usually the exact pitch pattern, or melody, of a song isn't important, but in this case the pattern is diagnostic - no other warbler sings this exact tune.

### **How Many Sections Are There?**

There are 4 Sections - two differently pitched Buzzes, then a pair of lower Clear Elements, and a final high Buzz.

### Conclusion

This warbler sings two songs, both of which are very consistent. This song has a melody of middle-high-low-low-high, and it's unique among warblers. In addition, the change of quality mid-song (from Buzzy to Clear) is also diagnostic for Black-throated Green.





# Blackpoll

Quality: Clear Pitch Trend: Steady Sections: 1





### What Is the Quality?

kНz

These are a series of Clear Elements. They're not fast enough to be Trilled. They are also very high—too high to hear for some people—and the joke goes "If you can't hear it, it's a Blackpoll!" Note how separated they are - the pace of the song is slow, and the Elements sound very staccato.

Darkening elements on the spectrogram

indicates increasing loudness

### What Is the Pitch Trend?

The pitch trend is Steady.

### **How Many Sections Are There?**

There is only one Section. Note how the early Elements are faded in the Spectrogram, and get darker further in. This means the song is increasing in volume.

### Conclusion

Steady, Clear, high, and staccato, this one-Section song is distinct for its high frequency and increase in volume. The only other warbler that increases in volume like that is Ovenbird, and that's a much lower song with 2-Element Phrases.

Trouble playing

the song? Click

here.

Click to Play Song



### What Is the Quality?

The Elements are Clear and slurred together.

### What Is the Pitch Trend?

The pitch and the pace are both Steady, with none of the Elements being very accented.

### **How Many Sections Are There?**

This is a 1-Section song, since the same groups of Elements (called Phrases) are repeated over and over. The pitch shape of each Phrase goes up and then down, in a sort of circular fashion.

### Conclusion

Common Yellowthroat is one of our most widespread warblers. It can sing Four- and even Five-element variations of this song, but the most common is the 3-Element variety shown.

The main confusion song for this bird is Carolina Wren. It can also sing a 1-Section, Steady Clear, song with 3-Element Phrases. But the Carolina Wren always puts a strong emphasis or accent on the first Element of each phrase, so instead of having a smooth, slurred quality like Common Yellowthroat, Carolina Wren has a sharp, distinctly accented song.



# Common Yellowthroat

Quality: Clear Pitch Trend: Steady Sections: 1

> Trouble playing the song? Click here.



Click to Play Song



Weak, dull near-Trill

# Yellow-rumped (Myrtle)

Second Section

fades out

Quality: **Clear** Pitch Trend: **Rising** Sections: **2** 





### What Is the Quality?

Ę

The Elements are just slower than a Trill, and are Clear. Note how each Phrase is made up of several Elements—it's too fast to hear them separately, but they have a warbly or complex quality to them. Also notice how the Elements look "squished" vertically, something we call Compressed. That means the Element covers relatively few pitches, and since it doesn't have high highs or low lows, it sounds dull.

manuta manuta the text the text of

### What Is the Pitch Trend?

Since the second Section is higher than the first, this song has a Rising pitch trend.

### **How Many Sections Are There?**

There are two Sections. Note that the Elements at the start and end of the song look faded, which means they are quieter - this creates a weak, indistinct quality in the song.

### Conclusion

There are other birds that sing 2-Section near-Trills or Trills: Wilson's, Nashville, and Orangecrowned to name a few. But none of them has the compressed, weak, warbly quality of Yellow-rumped, and that makes Yellow-rumped warbler song unique.

### Click to Play Song

Trouble playing

the song? Click

here.

### What Is the Quality?

The first Section of the song is a Trill—notice the series of closely packed near-vertical lines. Listening to the song you hear that there are too many Elements to count. The second section in the song is just a single Clear Element. Because the song has two qualities, we'll call it Partly Trilled.

### What Is the Pitch Trend?

The first Section of this song is clearly rising, and the Second doesn't change that much, so we'd call this a Rising song.

### **How Many Sections Are There?**

We can see two Sections here: first there is a long Trill, with a Rising pitch-trend. But then there is a very different, fast, clear, up-down Element to finish the song—that's the second Section.

### Conclusion

This song has a diagnostic combination: a Rising Trill with a clear up-down Element at the end can only be Northern Parula. In fact, all of Northern Parula's songs end with that distinct, Clear, higher up-down sound, which makes it a very handy diagnostic quality to know about.



# <section-header><section-header><section-header><text><text><text><text><text>

Click to Play Song



# Wilson's

Quality: **Clear** Pitch Trend: **Falling** Sections: **1** 



Trouble playing the song? Click here.



## Click to Play Song



### What Is the Quality?

here are a lot of repeated Elements here, but they are relatively far apart, so they're not too fast to count. That means this is not a Trill, but just a song with a series of Clear Elements.

### What Is the Pitch Trend?

Overall this song has a Falling pitch.

### How Many Sections Are There?

This a simple, one-Section song.

### Conclusion

So our final description is a one-Section, Clear, Falling song. One other thing to notice is that the clear, separated notes have a sharp or staccato quality. There are no other warblers that have one-Section, Clear, Falling songs, so this description is diagnostic in both the East and West.

### What Is the Quality?

This bird has a Buzzy song, which we hear when playing it. We can also see it in the spectrogram: each Element is "fuzzy", as opposed to straight line, and that indicates a Buzz.

### What Is the Pitch Trend?

The overall pitch of the song is Rising, with a gradual step up in pitch between each Element.

### **How Many Sections Are There?**

We can see in the Spectrogram that this bird has a 1-Section song. Don't be fooled by the gradual rise in pitch: although the pitch is changing a little between each Element, it's a steady change, and there is no sudden change in pitch or speed, so that makes it a single Section.

### Conclusion

So we have a song that is Rising, 1-Section, and Buzzy. If we look in the song finders in the Warbler Guide, or if we enter these three qualities into the Warbler Guide App filter, the only bird with this combination is Prairie Warbler.



# Prairie

Quality: **Buzzy** Pitch Trend: **Rising** Sections: **1** 

> Trouble playing the song? Click here.



Click to Play Song

9



Want to Learn More? Get the Warbler Guide App!

> Rapidly ID a bird with intuitive Visual and Audio Filters





Compare birds from any angle with **Rotatable 3-D Models** 

Play Songs/View Sonograms

and instantly compare them in the field





Find out more at our website **thewarblerguide.com**  Buy the app in the iTunes Store http://goo.gl/Hzq2y2

