

Playing the Native American Flute

Part 3 – Expanding The Range

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In the two 2010 issues of the *Cherokee Talking Leaves* (see archive copies at the SeCCI website if you don't have them), I introduced you to the basic scales associated with the 5- and 6-hole Native American Flute (NAF) in Parts 1 and 2 of this series. We covered the most important aspects of flute playing technique, so hopefully you're now able to improvise songs using those scales without too many squeaks and squeals. If you're still having problems, chances are you haven't been playing enough to make those fundamentals seem natural.

In this issue, we'll move on to a little theory – without getting real heavy and complicated – and extend your understanding of your flute and the range of notes you'll be playing. You've probably heard people talking about the "key" of their flute and, if you don't have any music training, wondered what they were talking about. Let's get started with a bit of that music theory.

The Chromatic Scale

Music has something called the "chromatic" scale, which includes all of the "semi-tone" (half step) pitches of the full range of sounds. The tones are given letter names between A and G, with "half steps" between most of them designated with a sharp (#) or flat (b). For example, the half step between an A and a B would either be called an A# (A-sharp) or Bb (B-flat), depending on whether you want to think of it as a half step above the A or a half step below the B. It is the same tone regardless of which way you refer to it. The full chromatic scale consists of: A – A# (Bb) – B – C – C# (Db) – D – D# (Eb) – E – F – F# (Gb) – G – G# (Ab) – A. Notice that B to C and E to F are only a half step apart and there are no tones (sharp or flat) between them. The scale then repeats itself. The distance between two tones with the same name is called an octave.

This example chromatic scale began with an A. It could just as well have begun on any note in the scale. We usually talk about a scale as a one octave range of the notes in that scale. We call the "key" of that scale by the name of the note on which the scale begins (and ends).

Instruments like the piano and guitar are considered chromatic instruments because they can play all of the possible semi-tones in their physical range. These instruments can also play several octaves. For example, the commonly-tuned guitar can play a little over 4 octaves, beginning on the low end with the unfretted "low" E string. The fourth octave is reached on the "high" E string fretted at the 12th fret.

The Flute's Pentatonic Minor Scale

For the NAF, we talk about an instrument that is very much restricted when compared to a piano or guitar. First, it is not chromatic in that it plays only a few notes from the chromatic scale easily. A skilled player might squeeze out a few more by partially covering a hole here and there, but there are notes you are not going to be able to hit. Second, all NAFs should be

able to play one octave well. Most can also play one to four notes into the next higher octave. One of the challenges in playing the higher octave notes on the NAF is that most NAFs are not precisely in tune in the second octave and many will not play a clear tone on the notes they can hit. Also, the fingering for the notes in the higher octave (sometimes called the "second register") can vary from flute to flute, even by the same maker. But more on that in a bit... The "mode 1" and "mode 4" scales that I introduced in the previous parts of this series illustrate only the base octave, and only contain a few (5 to be exact) tones per scale. We call these scales "pentatonic" (from the Greek meaning "five tones") because they contain five tones before reaching the octave note. You can see that's a far reach from the 12 tones in the chromatic scale. However, these scales are special because the spacing of the notes allows any combination of their notes to be played and sound good. Obviously, there are other combinations of fingering possible with five or six holes, and they may or may not go well with the notes of the basic pentatonic scale. When we talk about other scales on the NAF in future installments of this series, we will add notes to the base octave by introducing additional fingering patterns. These notes that are not part of the basic pentatonic scales are called "cross-fingered" notes. Note that not all flute makers will tune for the cross-fingered notes, so they may be dead on or a little off. For some cross-fingered notes, there may be more than one alternate fingering.

The Flute's "Key"

The first two parts of this series have been presented with no regard to the key or extended playing capabilities of your flute. As I said, almost all flutes are tuned to play one octave of its pentatonic scales. It's when you want to play with other instruments (even other flutes) or play a wider range of music (such as common western culture music, including familiar hymns or pop songs) that the information of this lesson becomes important.

The NAF basic pentatonic scale begins on the lowest possible note that the flute can play – the one that's played with all of the finger holes covered (leftmost note in Figure 1 below). The tone name of that pitch is called the "fundamental" tone of the flute and is also the name of "key" of the scale that your NAF is tuned to, or we'll call it the flute's key. The key of a flute is determined by a number of factors, the most prominent of which are the bore diameter and length of the sound chamber. The smaller the diameter and length of the sound chamber, the higher the flute's key. Conversely, the larger the diameter and length of the sound chamber, the lower the flute's key. There is a correlation between the diameter and length of the sound chamber bore to get the best voice from a flute, but that's for the flute maker to worry about, so we won't go into that here. The vast majority of flutes that you're likely to see or play are in the octave commonly referred to as the "mid" range. There are small flutes that have a fundamental in a higher octave and are referred to as the "high" range, while longer and bigger flutes may be in the "low" range. Very large flutes may fall in the "bass" range and a few even lower.

The mode 1 scale on the overwhelming majority of NAFs is called the pentatonic minor scale, which has become the *de facto* standard tuning for the NAF. If we say a flute is an "A" flute, most of the time we mean it has an A-minor pentatonic tuning.

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