

# Watch Your Mouth!

By Chris Apps

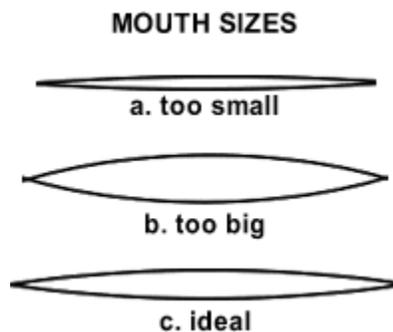
When a piper selects a new reed he/she is looking for tonality, response and stability. This is the ideal but the trio is not always found in a new reed. When a reed is very stable it often lacks responsiveness and brightness. Conversely, a brilliant, responsive reed will often display a lack stability. Ideal tonality will never be achieved with an unstable reed.

Striking a balance between these two extremes can be difficult. It is easy to settle for stability and miss out on the tonality. Harmonic tone is what brings our great instrument to life and makes it a joy to play. There are techniques that can be employed to any given reed that will allow a piper to obtain the maximum responsiveness and tonality without sacrificing stability.

A double reed is made with two pieces of cane (Latin: Arundo Donax) which vibrate against each other as air is forced between them. This vibration causes turbulence which in turn, produces audible sound which is amplified by a resonator, in our case, the chanter.

The larger the gap between the two pieces of cane the more air pressure is required to make them vibrate. The closer the gap the easier it is to make them vibrate. This gap is commonly known as the 'mouth' of the reed. Each piece of cane is known as a blade.

It is vital to establish a good mouth size before playing a reed and making any adjustments. The size of a reed mouth will have a profound effect on the pitch, tone, stability and the reed. Whilst there is no absolute, ideal, mouth size there are limits as to how large or small a reed mouth can be and still operate with a full balanced sound and provide a stable base from which to work.



## Detailed effects of differing mouth sizes

The examples in this illustration represent some extremes of mouth size and something close to ideal.

<b>Effects of mouth size on the reed</b>			
	<b>Too Small</b>	<b>Too Big</b>	<b>Ideal</b>
<b>Stability</b>	Very hard to control. Will easily change pitch with small variations in pressure.	Will probably be quite stable but will still be hard to control..	A stronger possibility of have a stable reed dependant on other factors such as length of reed and amount of cane on the blades.
<b>Tone</b>	Thin and lacking volume.	Brash and loud. Lacking subtlety.	Good potential
<b>Pitch</b>	High and unbalanced. Especially sharp on the top hand. High G will be effected more than the other notes.	Will be lower than a reed with the correct mouth size and noticeably flatter on the middle register namely C,D,E and F.	Will balance well if properly set.
<b>Strength</b>	This can vary considerably. Some reeds will be very easy to blow. Others will be hard to blow despite the mouth size. This is due to the amount of cane present on the blades. Thick blades will be hard to blow no matter the mouth size.	Hard to blow compared to the same reed with a properly set mouth.	This will vary depending on the amount of cane on the blades.

### Adjusting the mouth size when the mouth is too small

There are two techniques for adjustment that can be used. It is best to try technique #1 first and only move on the 2<sup>nd</sup>. if the first proves to be of no use.

1. Squeeze the mouth open by pressing on either side of the reed just above the binding. If using a ridge-cut reed it is sometimes necessary to wet the reed before squeezing. This is due to the amount of cane present in the body of a ridge-cut reed. Don't be afraid to put the ridge-cut in water. This will make the blades malleable without breaking the cane. Blow out the excess water and allow the reed to dry for a while before testing. This process will possibly need to be repeated.

2. Use a reed mandrel. An essential tool for any piper. This will open the blades as little or as much as you like and is more permanent. This will also bring an errant high G back into line and help remove some of the tape on the chanter.

### Adjusting the mouth size when the mouth is too big

The reed will need to be squeezed closed by pinching the flat side of the blades just above the binding. Again this may prove to be more difficult with a ridge-cut reed. Don't be afraid to wet the reed first. Just blow out the excess water and allow it to dry a little while before testing. This process may also need to be repeated.

### The mouth is a good size

If the reed has a good working mouth size but still does not respond in an ideal way, the following are some tips to fix some common problems.

#### Adjusting when mouth size good but reed is still too easy

There are some adjustments which may get the reed to a strength that feels more comfortable, more stable and produces a fuller sound.

First try to open the reed mouth a little with a reed mandrel. This is just a small change but will still be within the parameters of a good mouth size. Re-test and see if this helps.

Occasionally opening the mouth will cause the F to buckle and the Piobaireachd high G will lose stability. Never fear, all is not lost. Try shortening the length of the reed by taking a sliver of cane from the tips. This will have the dual effect of fixing these notes and making the reed harder to blow.

#### Adjusting when mouth size good but reed is still too strong

Some cane will need to be removed from the reed blades. This can be done with a blade or fine sandpaper (320 grit or above). This will ease the reed and help it produce a fuller, more responsive sound.

When removing cane from a straight-cut moulded reed, take just a very little at a time as cane removal will have a more profound effect with this style of reed.

When removing cane from a ridge-cut reed, a more robust approach is required in order to achieve the same results.

Remember to do this in small stages with frequent tests. It is easy to remove cane but impossible to put it back on so slow and steady is the way to go.

#### Adjusting when mouth size and strength are good but reed is still too tight

This means that the reed is lacking a good responsive, bright sound for the amount of effort being exerted to make the reed vibrate. Thinning the blades, especially at the tips (if the tips have enough thickness to do this), will make the reed more responsive without losing stability.

Reed adjustment isn't really difficult but knowing what to do and when can get confusing. Start with the mouth size and then move to other adjustments. Practicing on an old reed with help.