



Preparing New Reeds

By Gunnar Mossblad

Part One

Most saxophonists have a ritual or routine they follow for finding a great reed. Some players (and recently even some reed manufacturers) do not feel that any break-in period is necessary before playing their reeds. Instead they recommend playing reeds right out of the box after briefly moistening the reed with saliva.

LOCAL REEDS ARE BEST

One renowned saxophonist, who is on the road almost all year, recounted to me that best reeds he ever played where right out of a box bought locally in whatever town he was playing. He repeated this ritual for every concert with the rationalization that local reeds were always acclimatized and therefore played the best. Obviously this is an extreme example, but I have run across an increasing number of both classical and jazz saxophonists that have indicated a preference for performing on new reeds. Depending on the manufacturer and the luck of the draw one might need to tryout one or more boxes before finding a performance level reed. While this method appears to be hit or miss, it obviously works for certain players.

SELECTING AND PREPARING CANE

At the other end of the spectrum are those who follow a meticulous regime of selecting and preparing the cane, cutting the reed, balancing, and adjusting all aspects of the reed. In addition to a number of cutting tools and abrasives that aid in the handwork of making and adjusting reeds, several mechanical devices are available to complete the process. The ReedDual is a reed duplicating machine that cuts the vamp on a roughed out piece of cane stock. The machine cuts a copy of a great reed. It functions like a key duplicator found in most local hardware stores. There are also devices to measure reeds to the thousandths of an inch. Through the use of a micrometer mounted on a specially design aluminum table, a PerfectaReed measures the thickness of the reed in over 30 places on the vamp of the reed. After the reed has been cut and measured, it can be balanced utilizing a device called the Reed Wizard.

After the reed has been cut, shaped, and balanced a complex routine of soaking, playing and drying begins. The reeds may be soaked in one or more solutions for a precise amount of time, and played using specific exercises and dynamics. Then the reed is air dried. The following day the

process starts over and may continue for a number of days or even months until a perfect balance of humidity and flexibility is attained. Special solutions like distilled water are quite often recommended for soaking the reeds, and hydrogen peroxide, white apple cider vinegar, or salt water is used for cleaning and revitalizing reeds.

WHATEVER WORKS FOR YOU

There is validity to both methods if it works for the individual. I must admit I experimented with both methods at some point in time. In fact, I not only own a ReedDual and a PerfectaReed, when I find a great deal on Ebay or someplace else, I will buy the Reed Wizard to experiment with it just in case I can make the process of finding a great reed easier or better. In a pinch I will also play a reed right out of a box, but only after an emergency break-in that I will save talking about for another time.

MY ROUTINE IS SOMEWHERE IN THE MIDDLE

At this stage of my career I have a routine that is somewhere in the middle. I do not have time to make reeds from scratch. I would rather leave that up to the manufacturers, and spend more time preparing for my performances and projects. In the same regard, I like going into performances knowing what my horn and reed is going to feel and play like. Over the years I settled into a routine that does not take up too much valuable practice time, but has proven to be a reliable source of excellent reeds. I have found that the percentage of performance level reeds is higher than normal for each box.

EQUIPMENT

- The following is my must have recommendation for equipment.
- 400 and 600 grit Wet/dry Sandpaper
 - Single Bevel or Double Bevel Reed Knife
 - Permanent Ink fine point marker
 - Container for water (optional Sealable if traveling)
 - Portable reed holder
 - Small table or other flat surface with a glass or marble top
 - Journal or other small notebook
- The equipment list is relatively small and inexpensive. The budget minded could spend as little as \$20 to \$25 and have everything they need to get their reeds in tiptop

shape. The most costly item, the reed knife, is available at most music stores from \$17 up to more than \$75. However, single bevel reed knives are just jointer blades with a handle.

A cost effective solution is to purchase a replacement jointer blades at the local Sears hardware store for \$15 to \$20 for a set of three (depending on the length). The 400 and 600 grit wet dry sandpaper is also available at Sears for about cents per sheet. A permanent Ink pen, sometimes referred to as a laundry marker costs about \$2 at one of the many office supplies stores, and a small notebook can be as little as \$2. A good reed holder can be purchased for as little as \$5. (Note: reed cases that hold the reed by pressing against the heart and vamp of the reed should be avoided).

MATERIALS YOU MAY WANT TO USE

- Reed Rush
- Emery board or fine micro file
- Hydrogen peroxide
- Small "ziplock" baggies
- A small piece of glass ½" X 4.5" X ¼"
- Multi-drawer container
- Reed clippers

REED RUSH

Reed rush and files can supplement, or be used instead of sandpaper or a reed knife. The use of one tool over another is matter of individual preference. My personal preference is to use a knife for almost everything. I feel that I have the best control using a knife and know precisely where I am removing material.

HYDROGEN PEROXIDE

Hydrogen peroxide and ziplock baggies can be purchased from any drug store. The peroxide can be used to clean and re-vitalize otherwise spent reeds. By soaking the reed in the solution it loosens the oils and dirt that have been ingrained into the reed. I have included this in the optional list because by the time a reed needs to be re-vitalized, it is well past its prime, and I would throw it away.

ZIPLOCK BAG

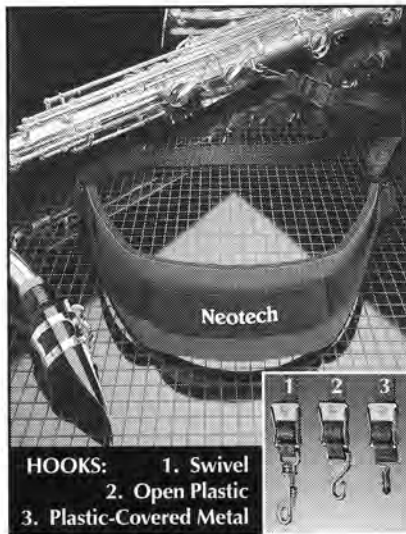
Ziplock baggies can be used as a portable humidior. Reeds can be soaked in the morning, put in a ziplock baggie, and retain their moisture until used many hours later. Some reed cases like the Vandoren reed case function the same way. A word of caution here, the reeds need to be removed at the end of the day and air dried or they will become a science experiment with a healthy mold growth.

SMALL PIECE OF THICK FLAT GLASS

A small piece of glass can be handy when working on the vamp of the reed, but it is



Various reed knives left-to-right: Craftsman single bevel jointer blade, single bevel reed knife, double bevel reed knife, double bevel straight razor from the 1800's



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certainly not necessary. I have included in the optional list a reed clipper because it can be used to firm up a reed. However, like the hydrogen peroxide, by the time a reed is so soft that only clipping the reed can extend the life of the reed, the reed is probably over the hill for its useful life. Further, reed manufactures have extremely precise and sharp cutting tools that that could not possibly be matched by a \$15 reed clipper. Therefore, clipping a reed produces a ragged edge on the tip that translates into noise in the tone.

MULTI-DRAWER CONTAINER

A multi-drawer container is probably the most valuable item in the optional list of equipment. It is used for storage of broken in reeds. Reeds can be sorted by overall quality. Drawers can be labeled for different kinds of reeds. Reeds that need to be cured for a longer time, saved for a different season, or need to be extensively modified can be placed in drawers labeled flawed, green, hard, or soft. Reeds that can be used for practicing, but are not quite performance level quality can go into drawers labeled "Good but soft" or "Good but hard," and performance quality reeds can be put in a drawer labeled great.

MAKING A SILK PURSE OUT OF A SOW'S EAR

My routine for breaking in and maintaining good reeds is dependent on the quality of the cane and cut of the reeds. As the old saying goes you can't make a silk purse out of a sow's ear. It should also be noted that it is best to buy boxes of reeds well before they need to be played. Unless a store has an old stock of reeds, when reeds are bought they are usually still slightly green and need additional time to cure. Reeds should be bought, labeled with a purchase date, and stored in a cool dry place for at least a month or two before playing them. A longer time is even better. This produces a higher percentage of useable reeds.

MY BREAK IN PROCESS

My break in process does not take much time away from practicing. The majority of the break in time is integrated into practicing. Reeds can be broken in during any part of a practice session as long as the range and dynamics can be varied continuously. The only significant time taken away from practicing is at the end of the process when the reed is sealed and polished.

The principle is simple. Over a 5-day period, the reeds should be:

1. Soaked for a prescribed amount of time that decreases each day.
2. Played for a prescribed amount of time that increases each day.
3. Air-dried in between days.

At the end of the process the reeds are adjusted, sealed and are ready to be played.

Begin by labeling all the reeds with a number that clearly identifies one reed from another. Since I often have 2 or 3 boxes going at the same time I personally like to give the reed a box and reed number so that I can keep track of what box and how old the reed was when I broke it in. For instance the first reed of a box labeled number 1 would have a 1-1 (eleven) on the reed. The second a 1-2

(twelve), the third a 1-3 (thirteen) and so forth.

SOAK AFTER LABELLING

After the reeds are clearly labeled, soak the reeds in water. The kind of water you use is a personal choice, whether distilled or tap water. My preference is just room temperature tap water. Soaking the reeds makes them pliable so that when the reed is vibrated the fibers in the wood do not crack or break. If the reed is too moist the fibers collapse when it is played. Not enough soaking makes the fibers break or crack. Soaking the reed also swells the wood. Alternately air-drying the reed overnight will shrink it again. Over the 5-day period a certain amount of moisture stays in the reed each day, and the amount of swelling and shrinkage becomes less. By the end of the fifth day the reed reaches a desirable balance of moisture that allows the reed fibers to vibrate move, in a smooth and easy way with out collapsing or breaking.

FOLLOWUP REED ARTICLE

In my followup reed article I'll continue with my closing remarks about exercising the reed, air drying overnight, comments about each reed after playing them, soaking and playing time cycle, sealing and polishing the reed, and flattening a reed. §

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By Gunnar Mossblad

Part Two

In this article I will continue with my remarks about preparing new reeds and this issue we'll look at exercising the reed, air drying overnight, comments about each reed after playing them, soaking and playing time cycle, sealing and polishing the reed, and flattening a reed. Part one of this 2-part series on preparing new reeds was published in the January/February 2004 *Saxophone Journal*.

EXERCISE THE REED

Playing the reed makes the fibers of the reed move in ways that it has never done before, therefore it is important to vibrate or exercise the reed for only a short period of time at first. It is also important to vary the way the reed is vibrated by changing dynamics range consistently. Breaking in a reed can be compared to someone starting an exercise program. Time must be spent stretching and warming up (soaking the reed), and on the first day it is important not to exercise too long or too strenuously. Just

as a person will become more limber and stronger with each day of exercise, a reed will become more limber and will become more flexible each day. If a person does too much exercise at first, soreness or even injury may occur. For a person this soreness will go away, but it is fatal for a reed that has no regenerative or healing properties. A reed that is exercised too hard or too long on the first day will collapse or break down. A reed that is over extended on the first day will not last as long as a reed that is properly broken in.

AIR DRYING OVER NIGHT

Air drying the reeds over night keeps the fibers from becoming too soft and collapsing. Lay the reeds down backside up on a hard flat relatively non-porous surface like glass or even ceramic tile. Laying the reed with the back facing up suspends the majority of the reed in the air.

Example 1 Chart

RD #	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
20	OK	OK	OK getting buzzy	OK buzzy	Polishing fixed - practice
21	Good but hard	Loosened up a little	Good	Good	Good-practice
22	Collapsed too soft	Collapsed - throw	XX	XX	XX
23	OK Lower stuffy	Lower free - upper soft	Back warped bad response	OK flattened back	XX Warped again throw
24	Great - WOW	great	Getting a tiny soft	Play now	Soft performance
25	OK - airy	Good not as airy	clearing up	good	Good/practice perform
26	Good	Good	Good	good	Good
27	Too hard	Hard	Better	great	Great performance
28	OK high register thin	Same	High getting worse	Too bright	Practice only
29	Great	Great	Great	Performance reed	YES! Performance

COMMENTS ABOUT EACH REED

After playing each reed a comment concerning the quality of the reed should be entered in a notebook or journal. Comments may be of any nature that is understood by the individual. For instance a reed might feel "stuffy," or it might be "great, but bright in upper register." My Example 1 Chart on the previous page shows typical entries for several reeds that are being broken in. Notice that at some point a certain amount reeds in every box won't be good enough to practice or perform on. Don't waste your time on these reeds, but don't throw them away either. Another mouthpiece or another season might change the way these reeds feel.

SOAKING AND PLAYING TIMES

The following proportions of soaking and playing times work well. The times may need to be slightly adjusted for different climates and reed types.

DAY 1

- Soak reeds 20-25 minutes
- Play reeds for 5 minutes
- Air-Dry reeds
- Record progress in Journal

DAY 2

- Soak reeds 15-20 minutes
- Play reeds for 10 minutes
- Air-dry reeds
- Record progress in Journal

DAY 3

- Soak reeds 10-15 minutes
- Play reeds for 15 minutes
- Air-Dry reeds
- Record progress in Journal

DAY 4

- Soak reeds 5-10 minutes
- Play reeds for 20 minutes
- Air-Dry reeds
- Record progress in Journal

DAY 5

- Soak reeds 3-5 minutes
- Play reeds for 25 minutes
- Air-Dry reeds
- Record progress in Journal

SEALING AND POLISHING THE REEDS

At the end of the fifth day the reeds should have an ideal moisture content, and the fibers themselves should be flexible. Immediately following the last playing session on the fifth day the reeds that have been designated performance or practice quality should be sealed and polished. Sealing the reed significantly slows the moisture loss, and polishing the cane will eliminate most if not all of the extraneous noise in the sound. The smoother and more polished the reed is, the clearer the tone is and the more responsive the reed is even at the softest dynamics. When properly sealed and polished the reed will feel to the touch like a highly polished piece of furniture, and when you

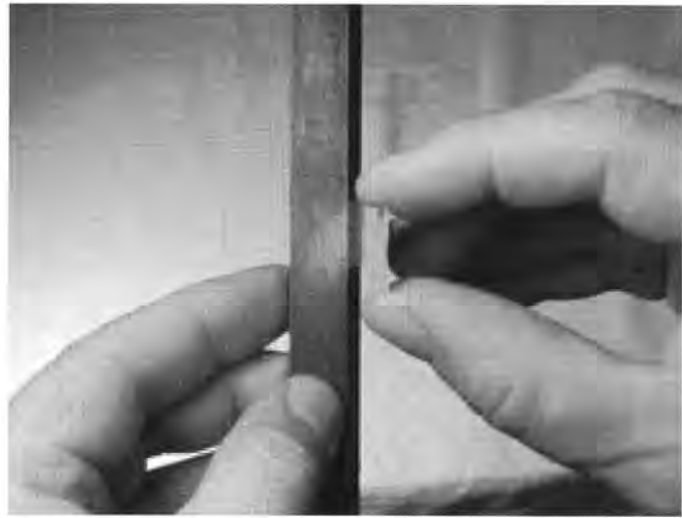


Photo 1

A light test utilizing the reed knife indicates the reed is flat on the back.

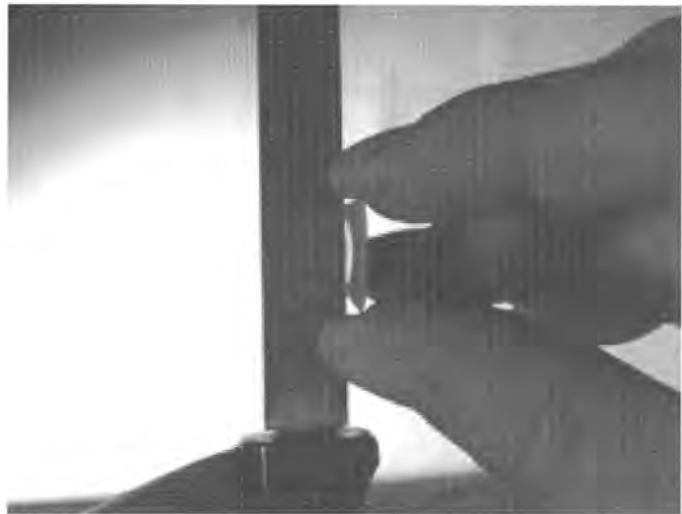


Photo 2

A light test utilizing the reed knife indicates the reed is collapsed or concave. Notice light showing through in the middle of the reed.



Photo 3

A light test utilizing the reed knife indicates the reed is swollen or convex. Notice light showing through in the edges the reed.

first play it will almost feel like an artificial reed because it is so smooth.

For a proper seal the reed needs to be flat. A warped reed will not be responsive, feel resistant, and have tendency to play a little more out of tune. In fact, a warped reed makes the horn feel like there is a leak somewhere. To check a reed for flatness run the straight edge of the reed knife down back of the reed while holding the reed up into the light (see photo 1). If the reed is flat no light will show anywhere between the knife and the reed. If is not flat, there will be light showing either in the middle of the reed (see photo 2) or on the edges of the reed (see photo 3).

TO FLATTEN THE REED

To flatten the reed a reed knife can be used the way a wood scrapper is used. Carefully drawing the knife across the flat of the reed (see photo 4). It is important that the knife remain as straight and flat against the reed as possible. Tilting the knife will make the back even less flat and destroy the usefulness of the reed. Sandpaper may be used instead of the knife, although the sandpaper will also thin the tip of the reed, and has a tendency to make the reed softer than if flattened with a reed knife. To use sandpaper to flatten the back of a reed, simply lay a sheet of sandpaper on a hard flat surface; lay the reed down on the paper and gently rub the reed back and forth in a straight line. (See photo 5)

Once the back is perfectly flat attention can be given to the vamp of the reed. Any burrs or rough places should be either scraped with the reed knife (see photo 6) or gently sanded with the 400 or 600 grit sandpaper (see photo 7). My preference is to use a combination of the reed knife and sandpaper. While holding the reed in one hand and the knife or sandpaper in the other, start at bottom of the vamp and gentle scrape or sand the reed in 1/4" sections moving toward the tip of the reed. Be careful not to go too close to the tip of the reed. The tip usually does not need any sanding and it is so delicate that if thinned too much will cause the reed to chirp. If the reed is "filed" any of the bark that may still be on the reed should also be removed with the reed knife (see photo 8).

After the back has been flattened and the vamp is smooth, it is time to seal the end of the reed. This is done by drawing a thumb nail or the dull part of the reed knife across the butt of the reed (see photo 9).

FINAL STEP: POLISHING THE REED

The final step is to polish the reed with ordinary stock writing or notebook paper. Lay the paper on a hard flat surface. Moisten the back of the reed with a small amount of saliva. Lay the reed on the paper and press down with the first three fingers of on hand. Rub the reed back and forth until the back has a shine all across the surface. This may take several minutes (see photo 10). Polishing the front is accomplished in a similar manner as sanding the rough places. Laying the reed on a hard surface with the vamp facing up. Take a small piece of paper and with the side of your thumb rub the length of the vamp until there is a shine across the entire vamp (see photo 11). Special care should be taken with the tip of reed. Should the thumb and paper go completely off, the reed the tip could damage on the return stroke.

CONCLUSION

After the reeds are sealed and polished it will play as good as can without specific adjustments. Quite frankly, since I have used this procedure I rarely need to make any other adjustments to the reeds. §



Photo 4
Flattening the back of the reed with a reed knife



Photo 5
Flattening the reed on sandpaper

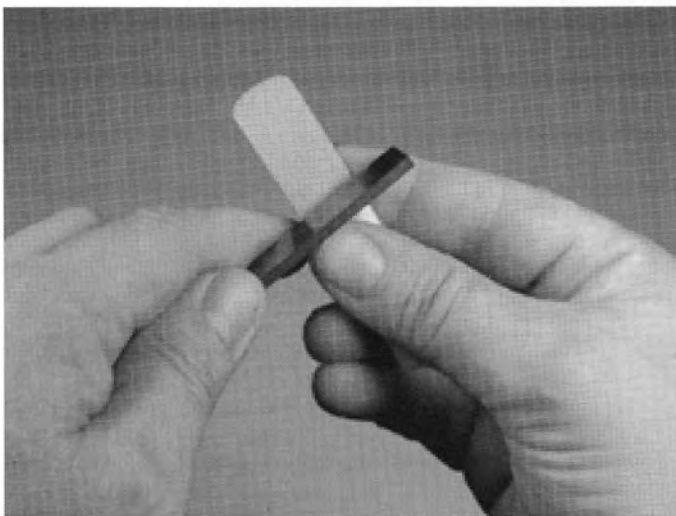


Photo 6
The vamp of the reed scraped with a reed knife

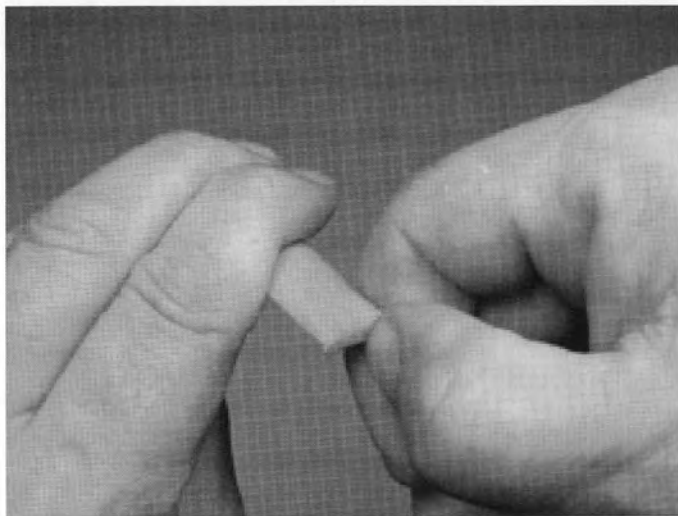


Photo 9
the butt of a reed being sealed by drawing the thumb
across the grain of the reed

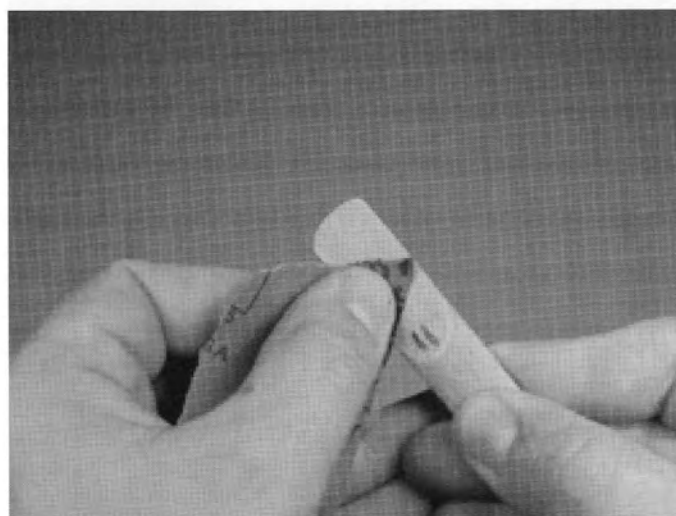


Photo 7
The vamp of the reed smoothed with sandpaper

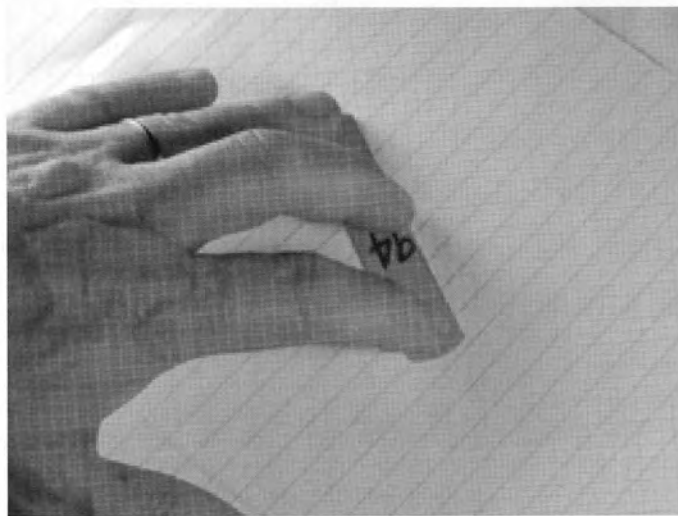


Photo 10
Polishing the back of the reed

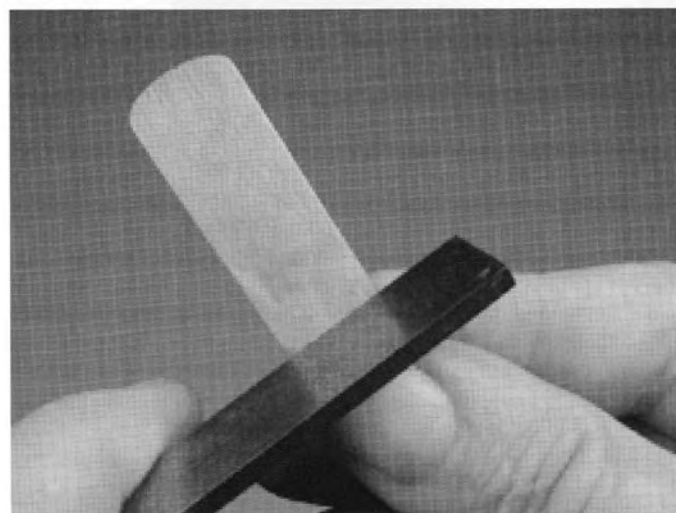


Photo 8
Removing extra bark from the filed portion of the reed

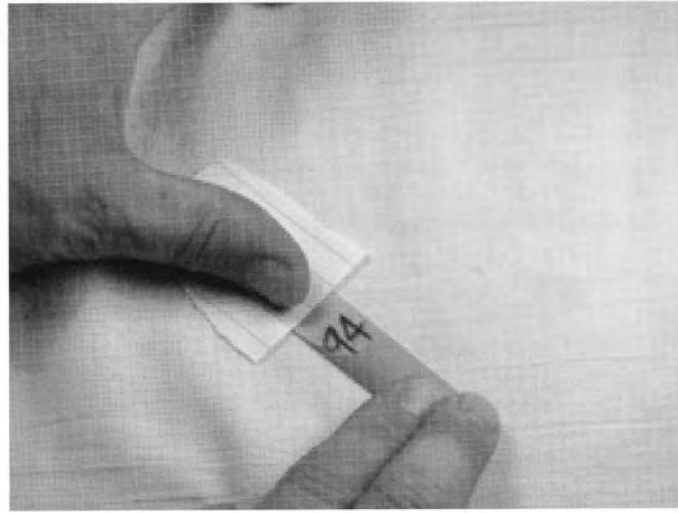


Photo 11
Polishing the front of the reed