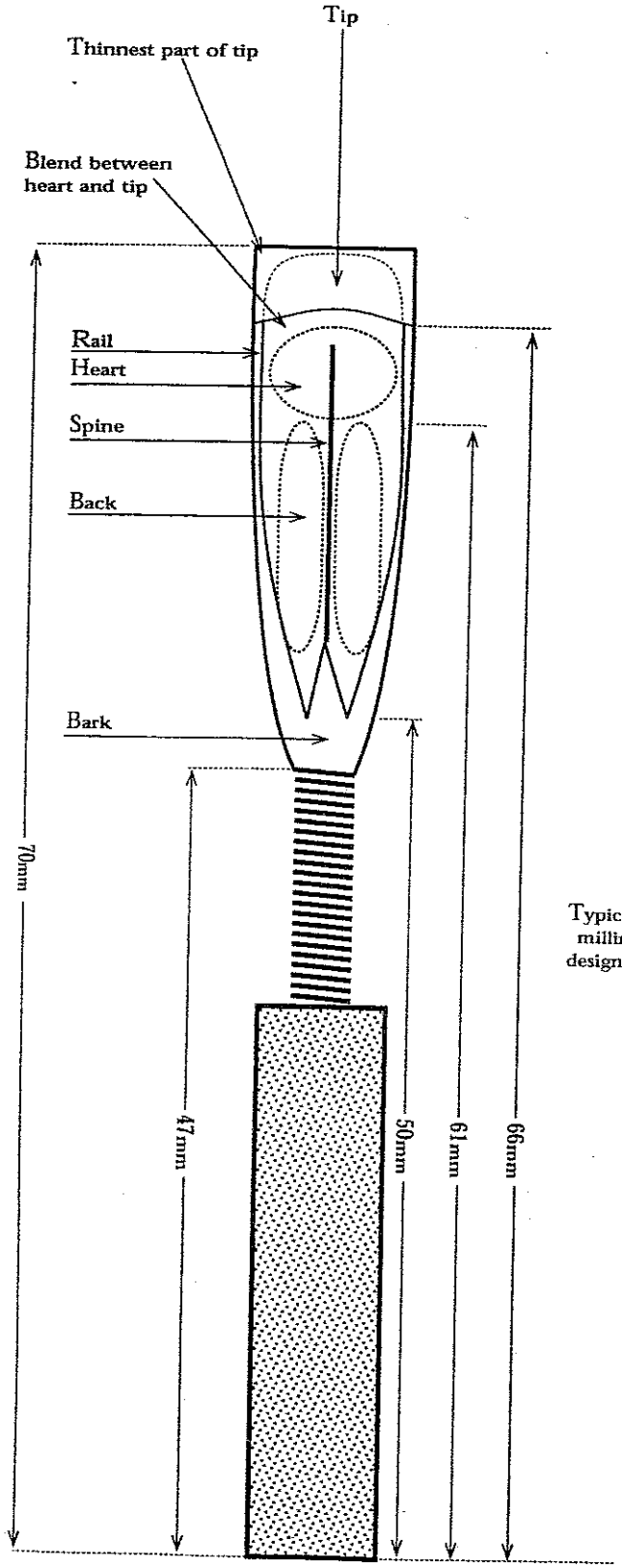
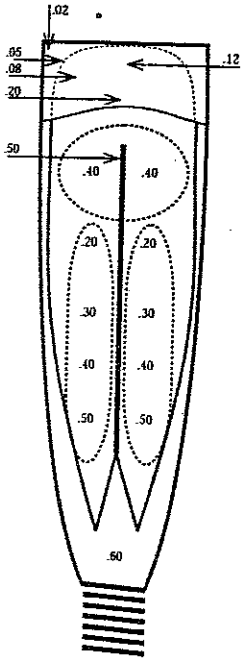
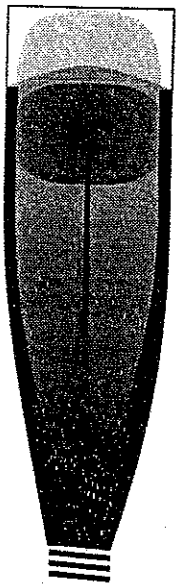
The Oboe Reed







Backlit

Typical measurements of my oboe reeds shown in millimeters. This is not a "recipe," but as a basic design it should result in a reed with structure, ease, warmth and vibrancy.

Profile

Oboe Reed Diagram

Martin Schuring

Arizona State University

OBOE REED MAKING GUIDE

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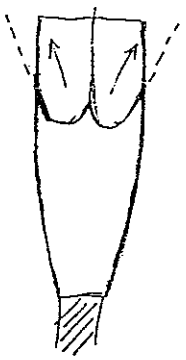
72.5-73

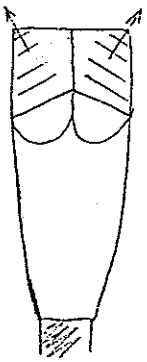
1. Tie "blank" reed at ~~24~~mm using 47mm staple. Tie as long as possible, keeping absolute seal along sides.

start on

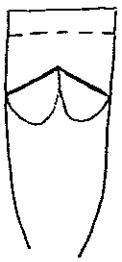
2. Rough in tip area - 8 to 10 mm back from end of reed. Begin by using a 'W' shaped scrape.



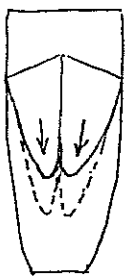
3. Begin to <u>define</u> actual tip. This will probably begin at appromimately 66mm. You should see this clearly when reed is held up to a strong light. Do not go too far without checking thickness.



4. Clip end of reed to separate blades. Insert placque and continue scraping and defining tip just until reed begins to vibrate when blown. VIBRATION



Begin the scrape of heart and back areas. Continue the 'W' type scrape. Scrape until low 8va of "crow" is introduced. There should now be 2 pitches, an octave apart. BALANCE

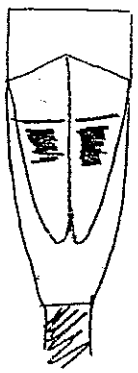


OBOE REED MAKING GUIDE (2)

6. Continue scraping both principal sections of the reed until response is easy and comfortable. Try to keep both 8vas of cr crow equal in response and dynamics - no extra tones are permitted, however!

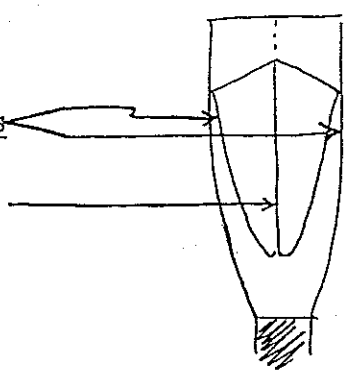
7. Check pitch of reed. Reed is probably to too long - and flat. Clip reed to bring pitch level up to A=440. Reed should both play and crow a 'C' when in tune.
INTONATION

8. After clipping (or any major adjustment) the reed will need to be re-checked for proper balance and response. Reed should play in oboe quite well at this point. See profile 2.



9. To increase control, stability, and to add depth and darkness to tone, begin "windows" behind heart of reed. See profile 3. Remember: this is not a cure-all.
STABILITY
TONE QUALITY

10. It is important to work for detail in the finishing of a reed. Try to emphasize the "ribs" and "spine" of your reed with your scrape. This is the 'skeleton' of your reed. Bark should be present up to the point tip begins and spine should be visible when held up to light.



OBOE REED MAKING

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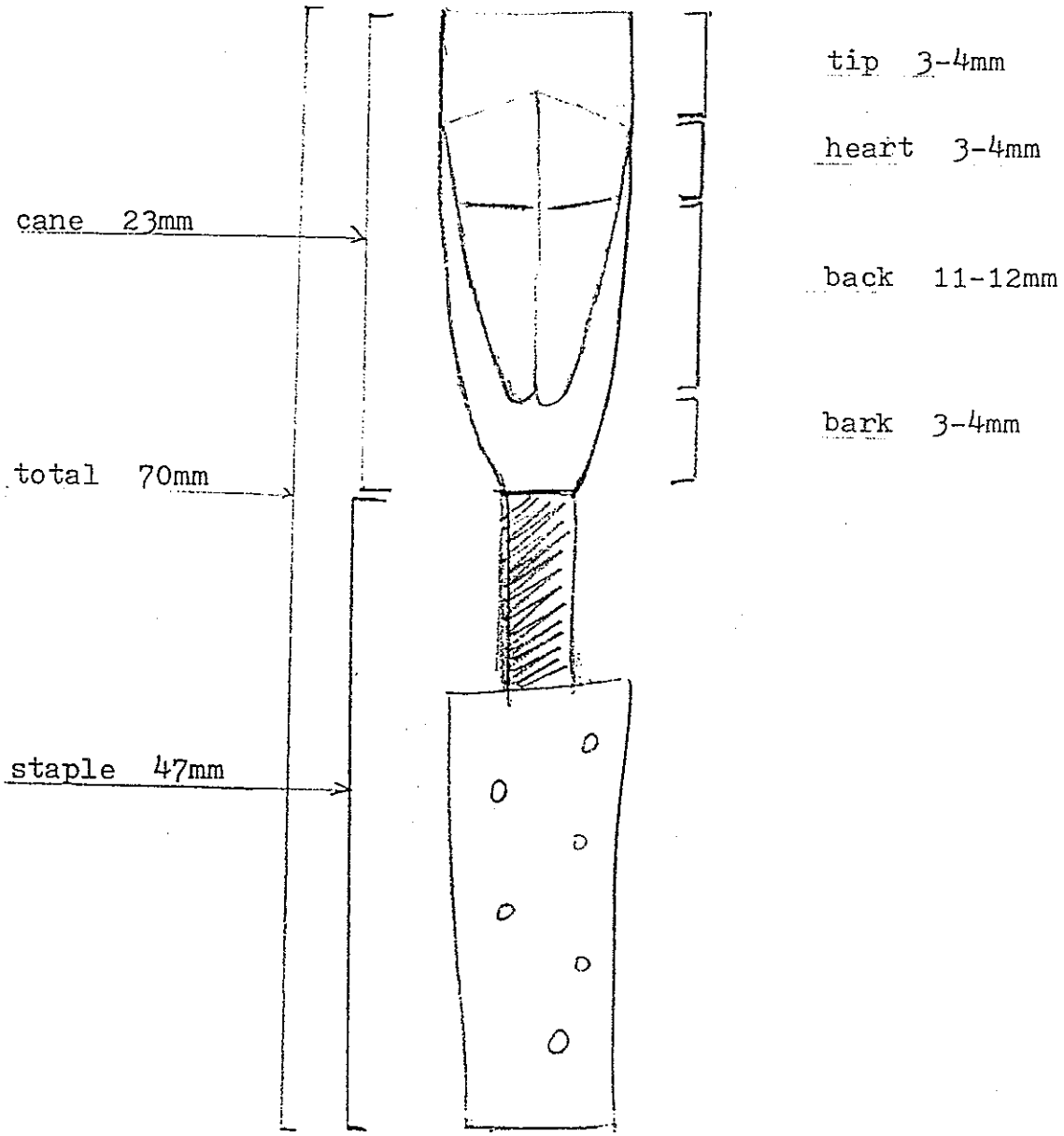
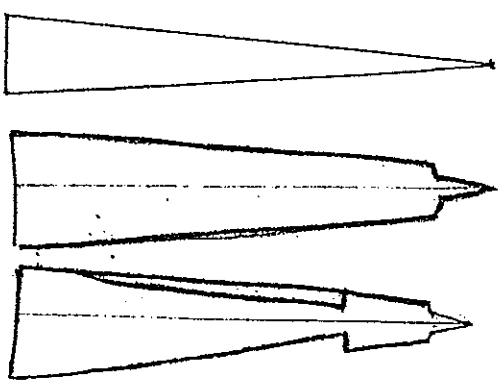
A finished reed.
This is the design we are working towards:



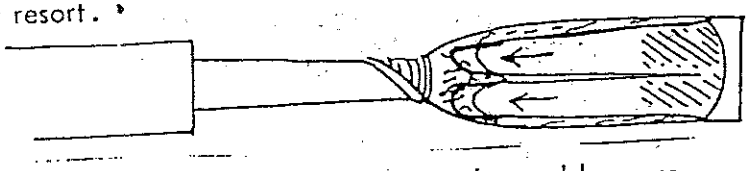
reed profiles:



Reed Adjustment

FLAT: 1) too long - clip tip, total length should be 69-71mm.
2) width of tip should be no wider than 7mm - if wider, narrow the sides with sand paper.

SHARP: 1) too short or improperly imbalanced - lengthen scrape at the back of the reed - lightly scrape heart as last resort.

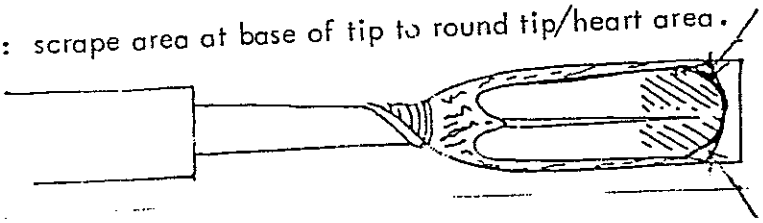


STIFF AND HARD: remove cane from tip first. If this does not correct the problem, remove cane from back and then from the heart only as a last resort.

TOO EASY AND THIN - NASAL: tip is too long and/or too thin, so clip the tip. If too much is clipped and the reed becomes unresponsive, thin the tip a little to restore the balance.

TOO OPEN: 1) while reed is wet, squeeze the blades together and hold them for a few minutes
2) scrape area on either side of the spine.
3) oversoaking causes a reed to open.

LOW NOTES UNRESPONSIVE: scrape area at base of tip to round tip/heart area.



DULL - STUFFY: thin the tip.

BRIGHT - HONKY: close the tip.

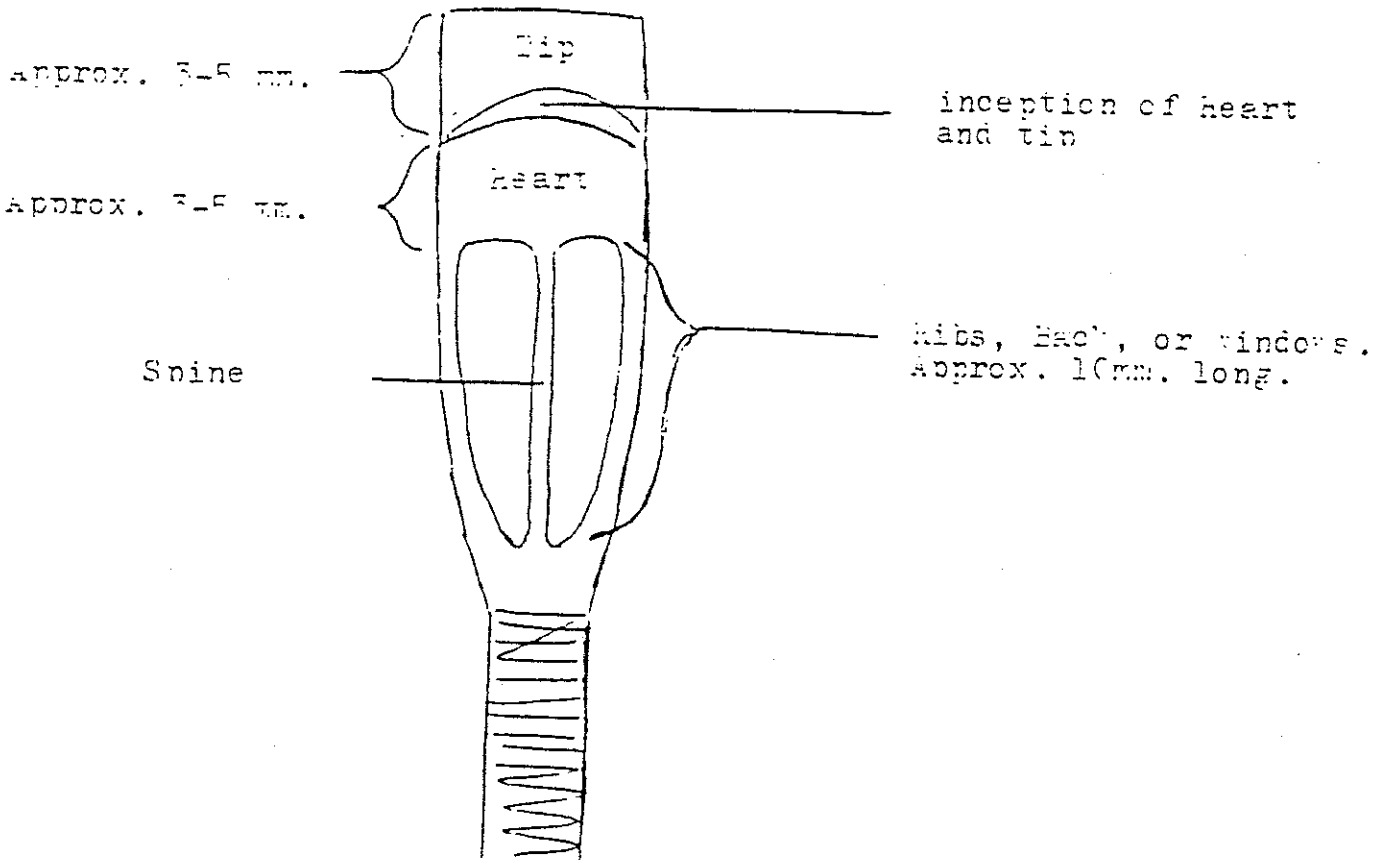
Each reed should produce a crow. This is the sound obtained when placing the lips down to the string of the reed. The ideal "crow" is a C, and if the reed is balanced properly, two octaves may be heard. If the "crow" is lower than a B, the reed will most likely be flat.

Care of the Reed

The reed should be stored in a reed case or another container (such as a sucrets box lined with kleenex) in which it can dry. If kept in a small vial make sure that holes are punched to allow air in that will dry the reed.

Before playing, the reed should be soaked in water (not in the mouth) for 3-4 minutes. Take care not to oversoak as this will cause the opening to enlarge and force the student to "bite" to close the reed.

OBOE REED PHYSICS



The average length of an oboe reed should be 68 - 70 mm. This measurement is from the tip of the reed to the bottom of the staple. There should be approx. 3-5 mm. of unscraped reed between the ribs and the tube. The basic proportions of the scraped reed are: 1/4 tip, 1/4 heart, and 2/4 ribs.

A good reed must have the following ingredients:

1. Proper pitch.
2. large dynamic range.
3. proper response.
4. good tonal quality.

Proper Pitch. Loree Oboes will generally play a 440 A when the reed length is 68-70 mm. Student oboes and student embouchures make this even greater of a variable. The general rule is "the longer the reed, the flatter it will play." If a reed is too flat it can often be corrected by clipping the tip to make a shorter reed. However, the more cane that is shaved off a reed, the flatter it tends to become.

Large dynamic range. In order to have a large dynamic range, the reed must have an adequate opening. If the opening is too small, the range tends to be quite limited. There must be an adequate amount of cane left in the heart and spine in order to have a large dynamic range.

Proper response. The opening of the reed is again a factor here. If the opening is rather large, the response will be harder to get than smaller opening reeds. However, if you close down the opening too much, you wont get a large dynamic range. Also, reeds with too much cane left on them are unresponsive reeds.

Tone Quality. In order to achieve a pleasant tone quality, the reed must be able to vibrate entirely, and in parts to produce a composite of overtones. The relationship of the parts of the scrape to their respective overtones is as follows:

TIP = short vibrations = High pitch or overtones.

BACK = long vibrations = low pitch or overtones.

HEART & SPINE. The heart or core of the sound. This is the mediator between the short vibrations of the tip and the long vibrations of the back. The heart is the balance point of the reed.

When balancing a reed, please be aware of the following concepts:

1. Predominance of the tip causes a brighter quality because the vibrations are short and produce high overtones.

2. Predominance of the back vibration causes a darker quality because the vibrations are long and produce low overtones.

REED ADJUSTING TIPS

Reed too hard to blow. Usually caused by too much wood still on the reed. First, thin down the tip. If it is still too hard, take a little off of the ribs. As a last resort, take some off of the sides of the heart.

Reed too easy to blow. (Not enough resistance.) This is usually caused by too much wood having been removed. Clip a very, very, little bit off of the tip. Usually, it will now be too hard to blow and you'll have to take more off of the sides of the tip.

Reed does not tongue crisply. This is usually caused by the tip and the inception of the tip being too thick. Thin both.

Reed plays high notes fine, but will not play low notes. 1. The opening may be too small. The only thing you can do is to soak the reed in hot water before you play it to open it up more. 2. You can make the inception of the tip longer by cutting the heart down approx. 1 millimeter. This creates creates more longer overtones.

Reed plays low notes fine, but will not play high notes without biting. This is usually caused by the opening of the reed being too large. To make a smaller opening, you can do one of three things: 1. Shave off more of the sides of the heart. 2. Take more cane out of the ribs. 3. With the soaked reed between you thumb and index finger, gently push the reed shut and hold for a few minutes. This breaks down some of the fibers and allows it to close more.

Reed leaks on the sides. 1. Take fine sandpaper or an emery board and sand the sides slightly. 2. Use "fishskin or goldbeaters skin". 3. Get a new reed.

Reed sounds shrill or quacky. This usually means that the tip is too long and thin. Cut a bit off the tip. You might lengthen the ribs to add more low vibrations. Possibly too much cane has been taken off the heart. If so, get a new reed.

Reed sounds fuzzy or woozy. Probably there is still too much cane on the reed. First, thin the tip. Second, take more out of the back. Third, take cane off of the heart. Sometimes you have a very responsive reed that just sounds flat and dull. In this case, too much cane was taken out of the back. Time for a new reed.

John Mack's never fail reed hints: 1. You must have a very sharp knife before attempting any of this. 2. You can never make the sides of the tip too thin.