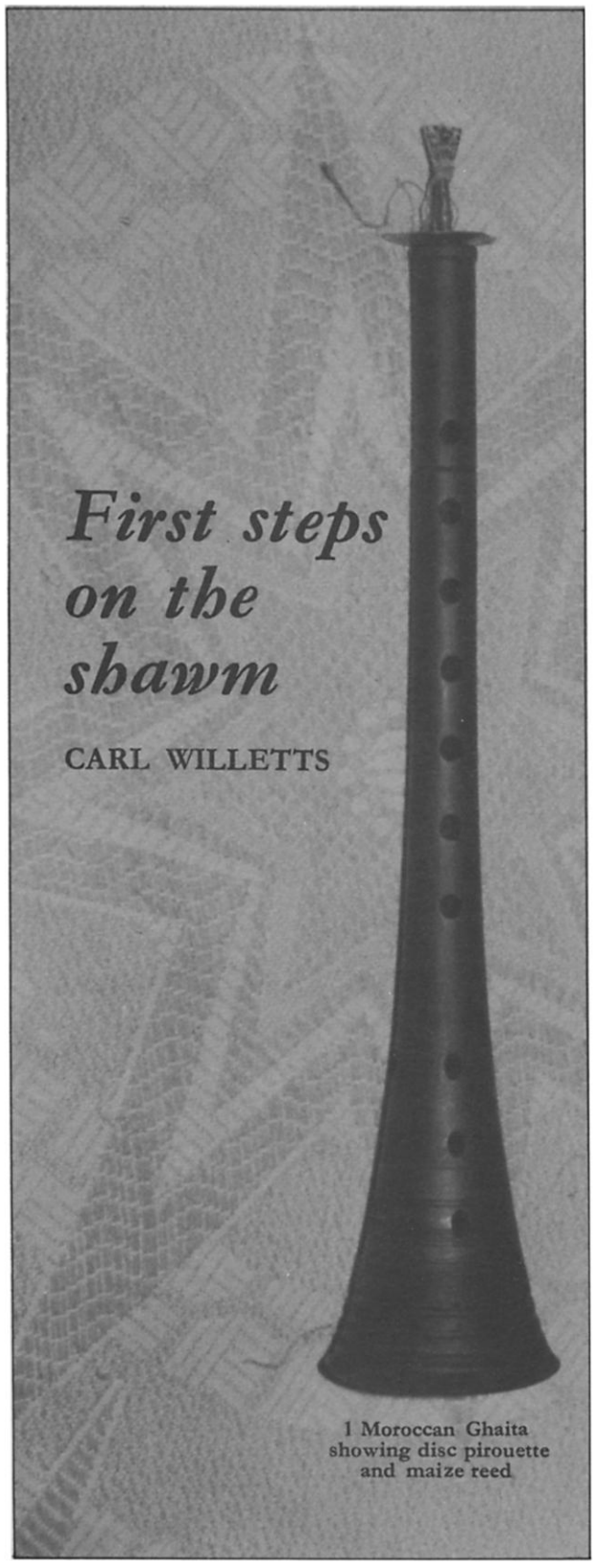


1 Moroccan Ghaita showing disc pirouette and maize reed

As Anthony Baines points out, the shawm must have been one of the most frequently heard of 16th-century wind instruments[1] and yet today, both on the concert platform and in amateur music circles, it is very much neglected. When a 'shawm sound' is heard, it is most likely to be a rauschpfeife, a relatively easy (i.e. non-embouchure) instrument, presumably derived from a reed-capped bagpipe chanter. The factor that deters many people who would otherwise like to play the shawm is the mystique surrounding embouchure and reed control. In this first article on shawms I would like to outline the main points of technique and try to correct some commonly held misconceptions. I will explain pirouettes and give some general hints on reed care etc, for the uninitiated. Some rather elementary points will need to be made, as I have seen novices (including myself) commit some quite obvious mistakes.

The information is based on my experience of modern folk shawms and modern copies of renaissance instruments. Fingerings will be referred to a shawm in C, i.e. 123/---- gives the note G.

Technique of Eastern folk shawms

Before describing the technique of European renaissance shawms, I would like to consider the eastern folk shawm which is spread widely over the old Islamic world, from West Africa to Sumatra, including those parts of Europe occupied or invaded by the Moslems and Ottomans. This is for two reasons, the first that they are very much like precursors of the European shawm and, secondly that they can be obtained fairly cheaply from many Eastern arts and crafts type shops in England and from their countries of origin when on holiday. Some may need retuning for use in European medieval music, but if you find one in European *mean* tone or *just* intonation or a church mode, use it as it stands. As they are so cheap, buy two—one to retune and one to keep in its original tuning.

The typical eastern folk shawm is sounded by means of a small triangular maize reed (e.g. in Kenya from Mvumo reed grass), fixed on to a metal tube or staple which fits into the top of the instrument. Some distance below the reed on the staple, is a disc of metal, bone, wood, or coconut shell, called the pirouette (illus. 1). Shawms without this pirouette are most likely to have derived from bagpipe chanters that 'lost' their bag, e.g. the small Breton bombarde, and some Indian

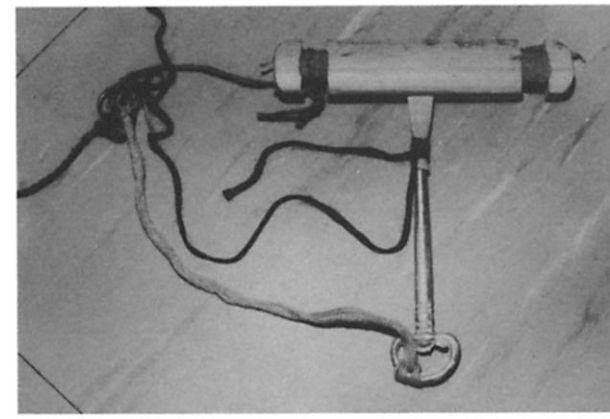
[1] *Woodwind Instruments and their History* (London, 1967), p. 268.

shawms, e.g. South Indian Mukavina or Nadasuram. I am concerned here only with the type *with* pirouette.

Before playing, soften the reed by soaking in clean water, if new, for several minutes. (Chinese reeds in China tea!) Fit the staple into the instrument; the joint between staple and instrument bore should be airtight. Now fit the pirouette disc (if loose), and then the soaked reed. Again, there should be an airtight seal between reed and staple—if not, the instrument may not sound or some notes may 'gargle' or 'yodel'. Next, adjust the gap between the ends of the blades of the reed by *very gently* squeezing or pinching it with finger-tips or teeth. If the gap is too narrow, the instrument may squeak up the octave (or not sound at all), and be very feeble on the bottom few notes. If the gap is too wide, the reed may not sound even at very high breath pressures. The correct gap can be found only by experience. If the reed does not sound or sounds only with difficulty at any gap setting, then it may be too dry (re-soak), or there may be an air leak between reed and staple. If it does not sound after much re-soaking, nor at any gap, try a different reed!

To play, engulf the reed and staple into your mouth so that both lips are pressed against the pirouette. You must keep the disc flush with your lips or the lips will soon tire from gripping the staple in order to form an airtight seal. Blow hard and firm, and gently tongue the reed on the underside to start it sounding. Do not tongue too hard or you may dislodge the reed from its staple and some are small enough to swallow with ease. Let your cheeks puff out, especially at high pressure as most oriental players do. The pirouette will prevent air leaking out between your lips. If you are afraid of your cheeks becoming distended with much playing, try wearing leather cheek straps (*capistrum*) as some Roman tibia players used to do—although there is no record of this quite useful item in medieval Europe.

Fingering is usually quite straightforward. You may have right or left hand uppermost. For the *main* notes of the scale, simply take off one more finger each time—there is usually no cross-fingering, but remember that the bottom (7 finger) note is usually a leading note, i.e. only a semitone below the 6 finger note. If finger 6 gives D then 7 gives C♯ and *not* C. Note also that the thumb and top finger-hole positions may be the reverse way round to those on the recorder, i.e. the thumb hole *below* the finger hole. Thus the functions of the thumb and first finger-holes will be reversed. Many folk players do not use finger-tips and rounded knuckles as on the recorder, but keep the



2 *Indian reedmaking kit showing maize reed, clamp and mandrel.*

fingers straight and use flats of fingers to stop the holes—sometimes even the second joint. (I have also seen Scottish bagpipe players do this.)

To obtain the second octave, increase the diaphragm pressure. You may have to give a sudden 'kick' with the diaphragm to break into the second octave and relax again once you are there. 'Leaking' either the first finger or thumb hole may help. The second octave may not be in tune with the lower—sometimes it is a tone flatter. There is often little that can be done other than learning a different set of fingerings (one tone out) for the second octave.

Special techniques and playing styles that can be developed are: (1) double breathing—to give a long uninterrupted line of music by breathing out through the mouth and in through the nose at the same time; (2) finger articulation (instead of tonguing, articulate the music by playing bagpipe-type grace notes, especially between repeated notes of the same pitch); (3) finger slide glissandi; (4) 'scoops' on a note, e.g. D-C♯-D completely slurred and glided simply by relaxing the breath pressure and increasing it again, keeping the fingering for the upper note held all the time; (5) finger vibrato. These effects are used by modern folk players—I do not know if they were used in medieval Europe.

One problem with these shawms is obtaining new reeds, as the right sort of soft rush or maize tends not to grow in Europe. If you can get some suitable rush, they are easy enough to make, using a wooden clamp to squash one end of the reed whilst the other end is opened out and bound on to a mandrel or other shape former (illus. 2). This problem must have faced the first importers of these shawms, i.e. in the 12th century! European reed, *Arundo donax* or *Arundo sativa*, is stiffer and does not take so easily to the engulfing technique

and it was probably for this reason that the renaissance-type pirouette was invented. As I have still got a supply of maize reeds, I have not yet tried to fit a cane reed to an Arabic shawm. It will be worthwhile experimenting and perhaps lead to the authentic manner of playing medieval European shawms which looked very much like the Moroccan *ghaita* in illus. 1.

Renaissance European shawms

First let me lay down the law concerning the use of pirouettes on renaissance shawms. All sizes except the bass and great bass had pirouettes (there were some exceptions to this but these were *real* exceptions and should not be copied mistakenly as the general rule), and it is a great pity that several modern shawm-makers do not supply them. However, if you lack one, they can be made (for small sizes at least) out of bottle corks or cotton reels if you do not have access to a woodworking lathe. Some pirouettes are shown in illustration 3. The pirouette actually helps, rather than hinders, the formation of an embouchure and helps the player to keep going over long playing stretches, e.g. at banquets and fairs. I hope to show why this is so.

The largest sizes, great bass and bass, do not have a pirouette but are played with a bassoon player's embouchure with the top lip encroaching further down the reed than the lower (fig. 1). Ensure that the

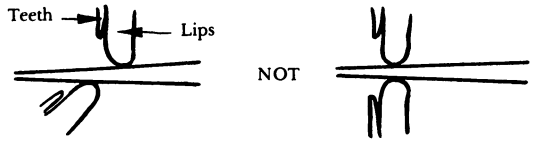


Fig. 1

reed enters the mouth perpendicular to the plane of the lips (fig. 2) or you will have difficulty in forming an

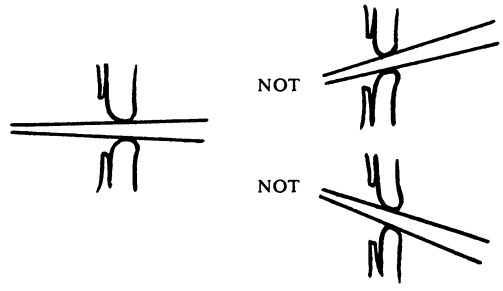


Fig. 2

embouchure. I advise you to consult a book on bassoon technique, but perhaps use a slacker embouchure than modern players. The basset size can be played without pirouette like this especially in 17th-century church music. For smaller sizes supplied

3 Reeds, staples and pirouettes for soprano pommer (separate and integral types), alt pommer and bassett pommer.

without pirouette, either make one, or use an oboe/cor anglais embouchure (see, for example, Rothwell's *Oboe Technique*, etc). Again, do not grip the reed as tightly as a modern player or the tone will be strangled. I will now deal in some detail with the basic technique of playing a shawm with pirouette as I know of no other account of it.

Reed and pirouette adjustment

1. Remove reed from case. Always keep your reeds in a safe box as they are fragile, expensive and a nuisance to make in a hurry. If the 'case' is a plastic tube, I advise punching a hole in the lid of the tube to ventilate, or the damp reed may easily go mouldy. *Never* leave a reed and crook *on* an instrument when not in use. It is very easy to knock over or brush a sleeve against it and ruin both crook and reed.
2. Soak the reed up to the adjusting wire or bottom of the scraped part of the blade in clean water. Always do this before use and after playing, if possible, wash it through with clean water and blow out excess moisture. They can be sterilized in an unsweetened spirit, e.g. vodka!
3. Examine the reed for leakages down the sides of the blade. There should not be an air or light gap down the side, especially lower than half-way down the scraped part of the blade. If there is, it can often be sealed by wrapping a small piece of gold beater's skin round the reed. The transparent 'Cling Wrap' food wrapping foil can often be used for this purpose.
4. See illus. 3. Assemble reed, staple and pirouette and fit on the shawm. The separate reed and staple type is the authentic one, even for small shawms, although nowadays oboe-type reeds (reeds permanently fixed to staple) are supplied. Try not to grip the blades of the reed too hard when fitting the assembly together. The separate type of reed is at an advantage here in that the staple or crook and pirouette can be put together on to the shawm before the reed is added. I have made a small reed like this for a soprano pommer but it is trickier to make than the integral oboe-type.

5. Ensure there is an airtight fit between staple and instrument bore, reed and staple and also preferably between pirouette and staple. If a reed does not fit on to the staple, some cane must be reamed out from inside the reed. Cure leaks with turns of thread, 'Sellotape' or a spot of wax.

6. For general good control, the top of the pirouette needs to come up to the adjusting wire of the reed (see fig. 4. If the reed or staple needs to be pushed into the

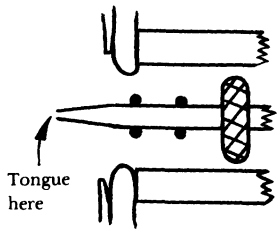


Fig. 3

shawm (to raise the pitch), or is so short that the staple comes further up the reed than the wire, then a shorter pirouette may be required. Mersenne gives for an alto shawm a pirouette total length of 6.5cm (2 inch 5 lines in the old Brunswick system) and Talbot (about 1696) gives detail for a treble (*Shalmei*) reed as: $\frac{1}{2}''$ wide at tip, $1\frac{1}{4}''$ long and $\frac{1}{4}''$ inside pirouette, i.e. 1″ exposed (in mouth).

The pirouette on a Nicolo or basset shawm can be reamed out to sit further down the crook and hence reveal more reed. Different reed designs may require different pirouette lengths (to play at the right pitch, etc.), so unless you have settled on a particular design, a collection of different pirouettes may be useful. I have five (made from corks) for my soprano pommer. On a Nicolo, or basset, the pirouette may need to encroach further down towards the top of the reed than on soprano and alto instruments. This may need to be determined by personal experiment.

7. To adjust pitch. (a) If flat, push the staple or crook further into its socket or push the reed further on to the crook. (b) Try a different length of pirouette. The nearer your lips are to the top of the reed the flatter will be the pitch (at constant breath pressure, etc.). Remember that, to sharpen, push in and/or use shorter pirouette; to flatten, pull out and/or use a longer pirouette.

8. Reed-gap adjustment. Step 7 assumes that the reed is itself adjusted correctly. The opening of the gap at the top should be adjusted for best tone rather than pitch, although it does have an effect on pitch. If the gap is very open, the sound will be loud, bright, flat in pitch and will require high breath pressure to play. If too closed, it will be sharper, quiet and weak, especially on low and cross-fingered notes and may tend to 'stall' at high breath pressures. The gap alters as the reed is soaked so adjustment should only ever be made on a wet reed (this also minimizes the risk of splitting). To close the gap, squeeze the wire (just below the scraped part of the reed) with fingers or pliers on the centre line of the blades of the reed *or* squeeze the lower wire or staple top along the edges. Do the opposite to open the gap (see fig. 4). A very small

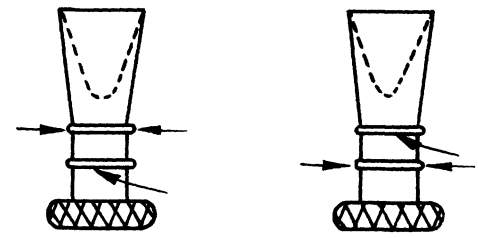


Fig. 4

adjustment causes a large change. The gap should be adjusted for optimum tone and response whereas pitch should be adjusted using crook and pirouette settings as in step 7 above. The gap may close up during a long playing session, especially after much second-octave work, causing a sharpening in pitch and weaker tone. To remedy, open the gap using the adjusting wire. Remember that you may have to reverse this when you next come to use the reed, so it is preferable to change to a fresh reed. If a reed gives a poor tonal response at any gap setting, if new, it probably needs scraping (see any text-book on the oboe for the general principles of reed-making technique—Moeck supply a good introductory pamphlet on the subject). If the reed is old there are four levels of treatment of increasing severity: internal cleaning, re-scraping, softening in peroxide, and throwing away. Do not forget to check for and cure gaps down the side of the reed first!

9. In general, fan (V) shaped reeds give bright tone but can be less stable, cigar butt (U) shaped reeds give fatter but softer tone (more plummy), and are easier to control on some makes of shawms (e.g. German makes, Moeck and Körber).

Embouchure

Having soaked the reed, adjusted its gap, assembled the crook, reed and pirouette, you are ready to play. There are two basic embouchures: uncontrolled and controlled. Both have their uses, so I will deal with the simplest first.

Press both lips against the pirouette surface. To do this without looking at your feet you will have to hold the instrument up at an angle of 45° or higher, unless the instrument has a bent staple (crook). Holding the instrument up and keeping the elbows away from the rib cage will help make for good uninhibited blowing. Naturally the weight of the instrument, especially in the bell section, is a limiting factor here. The lips should make an airtight seal against the pirouette surface *without* touching the reed. Blow hard from the diaphragm and tongue the reed on the bottom edge of the tip (fig. 4). If no sound results, check for leaks down the sides of the reed, re-soak the reed, adjust its gap or blow harder. The wider the opening of the gap, the harder you will have to blow.

Using this embouchure (if it merits the name) you may need to allow your cheeks to puff out. You are playing the reed virtually as it is on a crumhorn or rauschpfeife, i.e. completely free. If the reed is adjusted correctly, you will have the freest, brightest, loudest, most uninhibited sound that your shawm can produce. This is what is required for outdoor dances and fanfares, or to quote Mersenne (1635), 'for weddings, for village festivals, and for other public celebrations, because of the great noise that they make and the great harmony that they render, for they have the strongest and most violent tone of all the instruments, except for the trumpet'. Drayton (1613) concurs with this impression: 'E'en from the shrillest shawm unto the cornamute'. If a note tends to be out of tune either change fingering, if it is cross-fingered, or adjust the breath pressure to correct the intonation. To obtain notes in the second octave simply blow harder—the first overblown note may require an extra push or kick from the diaphragm at the moment of tonguing. This is fine as far as it goes and is adequate for many purposes *but*

a) If you have much second-octave work your diaphragm will become tired very fast. This becomes less of a problem with practice. Elyot (1533) remarks that sackbuts and shawms 'requyre moche wynde' and consequently benefit the 'entrails whiche be undernethe the mydriffe'.

b) The tone may be uneven—cross-fingered notes may be weaker than the others.

c) Some notes may be unstable or quite out of tune.

d) The technique is generally unsuited for playing indoors, accompanying choirs and playing polyphonic music. The writer of the 16th-century Leckingfield proverbs points out in proverb XVIII:

'A shawme makithe a swete sound for he tunyth basse,
it mountithe not to hy but kepithe rule and space
yet yf it be blowne withe a vehement wynde
it makithe it to mysgouerne oute of its kynde.'

To overcome these problems, a more sophisticated embouchure is required. Place your lips on the reed and continue playing as before (fig. 5). Do not squeeze

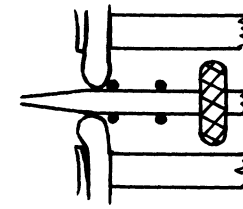


Fig. 5

or grip the reed at this stage. The teeth should not touch the reed but should be kept well apart so that the lips form a slight cushion between them and the reed; the tone will be only fractionally less free than before and the embouchure will suffice for most of the first octave. To obtain good tone on the lowest note you may have to revert to the 'lips off' embouchure. A slightly flat note, e.g. F♯ fingered 123/4--- can be 'humoured' up by *slightly* squeezing the reed between the lips whilst maintaining the same breath pressure.

To flatten a note, and to obtain bottom C♯ using the fingering for D, retract the lips from the pirouette towards the tip of the reed and relax the breath pressure. This may be done by moving only the bottom lip as in fig. 6—the general feeling is that of

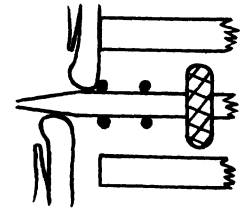


Fig. 6

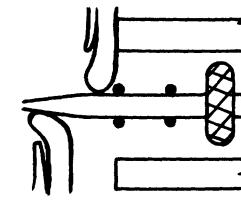


Fig. 7

lowering your chin whilst still keeping the lip on the reed. It is such control of pitch by positioning the lips along the reed that makes pirouette length critical. A pirouette that is too long will cause you to play flat, unless the reed is pinched with the lips giving a strangled tone, or a higher breath pressure is used. Either way flexibility suffers.

To play quietly, relax the breath pressure and re-establish pitch by sufficiently squeezing the reed. For long passages, adopt the bottom lip back position, curling the bottom lip over the teeth rather more than usual and squeezing the reed upwards, which will give a less strangled sound than just squeezing with both lips flush on the pirouette (see fig. 7). This position is

also good for passages in the second octave although the occasional high note is usually helped just by squeezing as in fig. 5 whilst the breath pressure is increased. A minute hole in the crook, especially on lower shawms, aids overblowing into the second octave as well as enriching the tonal spectrum of the bottom notes.

You have to find a balance for the amount of embouchure to apply between flexibility and control and the tone you are aiming for. Without a pirouette, you have no choice—you are forced to form an embouchure and to achieve a full loud tone you must use a wide-gapped reed with high breath pressure in which way the lips soon become 'smashed'. With a pirouette you can use a harder reed, you have a choice of how much embouchure to apply (if at all), the lips do not inadvertently slide about on the reed and you have in effect an extra ring of lip muscle to contain high breath pressures. The pirouette in no way prevents the tongue executing fast repeated notes, as some writers have claimed.

Summary of embouchure

1. Use a pirouette on smaller shawms.
2. Leave the reed free to vibrate, as unencumbered by the lips as possible, to obtain the brightest tone.
3. Humour poor notes, out-of-tune notes and the second octave with a slight embouchure.
4. For permanent loudness use a wide-gapped, short, broad reed and adjust pitch by means of high breath pressures, staple insertion and pirouette length.
5. For temporary loudness relax lip pressure and blow harder.
6. For permanent softness use a long narrow reed with small gap. Use low breath pressure and a long pirouette (or no pirouette).
7. For temporary softness relax the breath pressure, and squeeze the reed with the lips, perhaps retracting the bottom lip to form a bassoonist's embouchure.
8. 5 and 7 lead to good flexible playing.

Fingering

Several matters and tips for fingering can be listed as follows: (I refer to shawm pitched in C).

1) Renaissance shawms are designed to be held left or right hand uppermost by the use of dummy holes or swallowtail keys for the seventh finger.

2) Renaissance shawms did *NOT* have double holes for chromatics (like baroque oboes), as supplied by some modern makers.

3) Renaissance shawms did *NOT* have thumb holes, as supplied by some modern makers.

4) Try to keep cross-fingering to a minimum.

e.g. F♯ 123/4––– best tone but flat.
123/–56– weak
123/–5–7 sharp and a bit weak

5) E♭ is 123/45–7. This works better in the second octave than in the first where it is very sharp.

6) Some second octave fingerings are:

C –2–/–56–

C♯ –23/4567

D –23/456– or ↿23/456– (↿ = hole approximately half closed)

E ↿23/45––

7) Top G and A may be helped in stability and pitch by the addition of some lower hand fingers.

e.g. G 123––67
A 12––567

8) Different reeds may require different sets of cross-fingering.

9) A range of a twelfth on unextended shawms is sufficient for most purposes.

I hope my experience will be of use to aspiring shawm players.

I should like to thank John and Pat Hanchet, who have greatly helped my own playing and acted as sound boards for my theories and ideas on shawms and their music.

Robert Kindred