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Reconstructing the „fifres“ of the Grande Écurie

Boaz Berney

Abstract

*The activities of the group of eight players in the group entitled *Fifres et Tambours* under Louis XIV are well documented. The four *Fifres* were an important part of the court life, and their responsibilities ranged from outdoor to indoor functions. There is, however, very little information about the type of *fifres* that were actually used by these players, and very little surviving music to account for what they played on these instruments. This paper will evaluate fingering charts, surviving instruments, and contemporary repertoire, gleaned from earlier as well as later sources.*

Introduction

The activities of the group of eight players in the group entitled *Fifres et Tambours* under Louis XIV are well documented. The four *Fifres* were an important part of the court life, and their responsibilities ranged from outdoor to indoor functions. They accompanied the flag and the Sun King on his voyages, provided music for the king's daily ceremonies and participated in court festivities and stage works.¹ There is, however, very little information about the type of *fifres* that were actually used by these players, and very little surviving music to account for what they played on these instruments. In order to reconstruct the *fifres* used in the Grande Écurie, we had to search for additional evidence in earlier as well as later sources: surviving original instruments, fingering charts, repertoire and iconographic material. As the subjects of

¹ Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy from 1640–1760*, Oxford 2006, pp. 54–53.

terminology and iconography are covered by Sarah van Cornewal in her article,² this paper will concentrate on the remaining source material: fingering charts, surviving instruments, and contemporary repertoire.

Fingering charts

Fingering charts for the fife can be found in several sources from the seventeenth to nineteenth centuries. Unfortunately, as we shall see, many of them are problematic, and make it difficult to judge the acoustical qualities of the instrument they were intended for. However, there are some reliable sources which help us understand the changes taking place in the design of the instrument during this period.

The earliest fingering chart is found in Marin Mersenne's *Harmonie Universelle*.³ This source has been widely discussed in the past, mainly because it appears to contain the earliest baroque style fingerings for the flute.⁴ However, as clarified by Philippe Alain-Dupré, there are some anomalies in the charts that make drawing conclusions based on this source difficult. Mersenne presents three charts: two for the *flûte d'allemand* and one for the *fifre*. The *fifre* chart is for an instrument in g with a range of two octaves, g-g", probably sounding an octave higher than notated. There are some obvious mistakes in the chart, as Mersenne indicates to keep the first hole open for the entire second octave, which would not work on any sort of transverse flute. It is likely that he confused the flute with the recorder, which does need its thumb hole open for the second octave. If we close this first hole, then we have a fingering chart that would work on a cylindrical-bored renaissance type instrument in g'.



Fig. 1: Fife fingering chart from Mersenne's *Harmonie Universelle*, Photo: B. Berney.

² Sarah van Cornewal, "Les fifres dans les compagnies entre 1660 et 1761", 2009, www.forschung.schola-cantorum-basiliensis.ch/de/forschung/grande-ecurie/van-cornewal-fifres-et-compagnies.html (accessed 01.12.2021).

³ Marin Mersenne, *Harmonie universelle*, Paris 1636–1637, pp. 241-244.

⁴ See Ardal Powell, *The Flute*, New Haven 2002, pp. 57-59. Philippe Alain-Dupré, *Mersenne et ses Contradictions*, a paper given at the 2002 Basel Renaissance Flute days. <http://allaindu.perso.neuf.fr/fluterenaissance/Mersenne.htm>.

A second fingering chart for the fife can be found in Diderot's *Encyclopédie* (figure 2).⁵ This would have been an ideal source for reconstructing the fifes of the Grande Écurie, as it is both from France and from the right time frame. However, like Mersenne, this source contains too many anomalies to be of much use.



Fig. 2: Fife fingering chart from Diderot's *Encyclopédie*, Photo: Boaz Berney.

At first glance, this is a fingering chart showing the range of an instrument of two octaves, however, it is unclear if it is really meant to be read in French violin clef (which would be quite unusual for this date), or in normal treble clef. The first fingering, would indeed play an F natural on a baroque or renaissance type flute, however, the next fingering would sound an e and the one after that an f#, which would point that the fingering chart is indeed noted in G2 (table 1). Even if we accept this premise, which seems to be the most likely one, there are still too many open holes on the chart to make sense. Fingering 1234-6 would not give the fundament of any known flute, and neither would the fingering for the same note an octave above –34-6 seem very logical. As with Mersenne's table, the fingerings for entire the second octave of the instrument start with a first open hole, which again, does not seem to work on any flute that we were able to try. If, as with Mersenne, one presumes that the first hole should be closed for the second octave, many of the resulting fingerings look like they might work on a cylindrical bored flute, like that of Mersenne. Even then, there are some strange looking fingerings, like those for the second octave a, c and d. Unfortunately, there seem to be too many anomalies in this table to make it practical for a reconstruction.

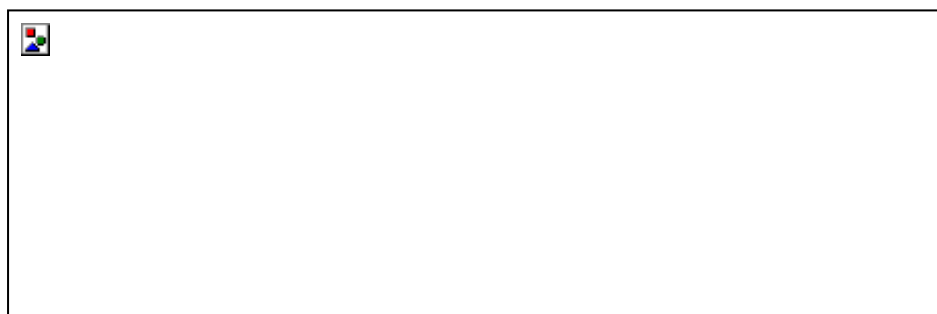


Table 1: A reconstruction of Diderot's chart © B. Berney.

⁵ Denis Diderot and Jean le Rond D'Alembert (ed.), *Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers*.

A more useful chart for the fife is one drawn by Giles Gibbs Jr in *His Little Book for the Fife* (1777) (fig. 3).⁶ The chart gives fingerings for nearly two octaves, from d to c'', probably meant as the top two octaves of the instrument. Interestingly enough, the bottom octave is not shown, either because the fingerings are simple and were obvious to the player, or because the bottom octave was not really of much use on the fife.

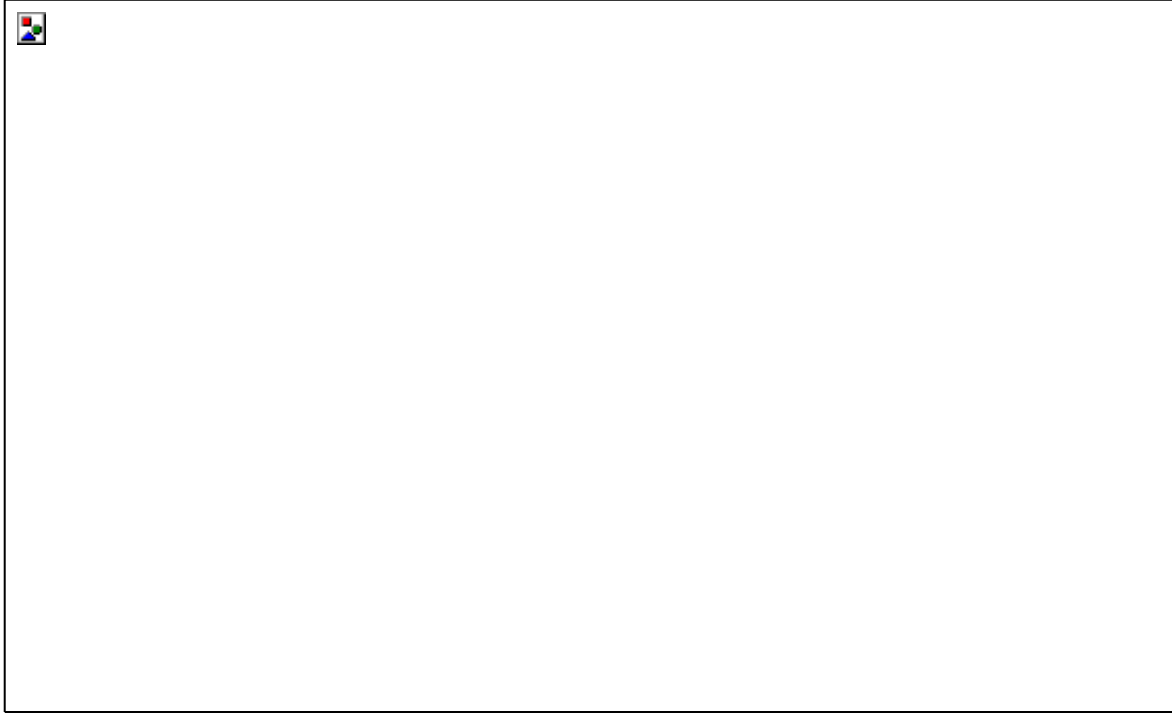


Fig. 3: Fife fingering chart from Giles Gibbs Jr: *Little Book for the Fife* (1777), Foto: B. Berney.

This is the first source that clearly shows baroque fingerings for the second octave a and b, and we can presume that it is meant for a conical instrument. Although it is noted in D, it is more likely that it sounded a fourth higher, as no D fifes from the period are known, while G instruments were more common. As the fife would have been played alone or with the drum, there is no reason to notate the actual sounding pitch rather than the fingering with which the player would be familiar.

Another fingering chart can be found in the *Pfeifer Ordonnanz für die Eidgenössischen Truppen* published in Zürich in 1819.⁷ Although this is a later source, it is an interesting one as it is very precise, giving full chromatic fingerings for a fife with a range of two and a half octaves (figure 4). The chart gives baroque fingerings for the second octave a and b, indicating a cylindrical instrument.

⁶ Giles Gibbs, Jr.: *His Little Book for the Fife*, Ellington, Connecticut 1777. Edited from the original manuscript by Kate Van Winkle Keller, Hartford, 1977.

⁷ Johannes Bühler, *Pfeifer Ordonnanz für die Eidgenössischen Truppen*, Zürich, 1819.



Fig. 4: Fife fingering chart from Pfeifer Ordonnanz für die Eidgenössischen Truppen, Zürich 1819, Foto: Alex Haefeli.

Surviving instruments

The next logical step was to look for original instruments which could be used to reconstruct the fifes used in the Grande Écurie. Unfortunately, we were thus far unable to find any French instruments from the right time period, the earliest surviving French fifes date from the early nineteenth century. We had two possible solutions for this problem: choosing an earlier or a much later surviving instrument for copying. Unfortunately, these would be of non-French origin as well. After a long search we narrowed down the options to three types of surviving originals: the “Altenklingen” flute (A-V: SAM 1028), one of three flutes by Deterdingen (S- Stockholm: AM. 084933-8) or a fife by Sattler (D-Berlin: MIM 2714). Following is a discussion of all three types of originals.

The “Altenklingen” flute, A-V: SAM 1028

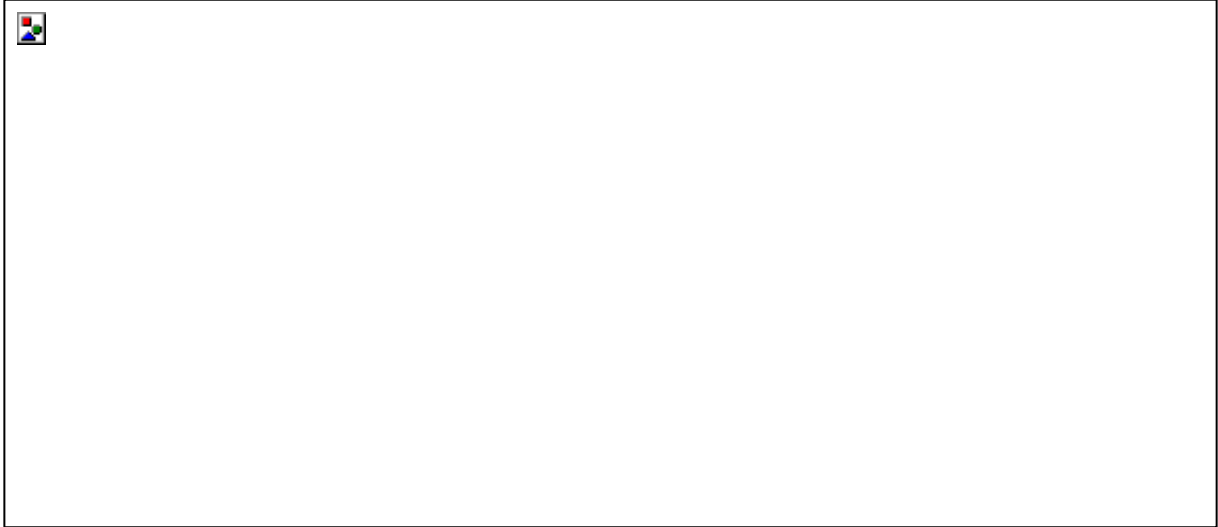


Fig. 5: A-V: SAM 1028 and its matching case, SAM 1029.

This unstamped flute (figure 5), originally from Schloss Altenklingen in Switzerland, is the only remaining flute of a group of four instruments that used belong in its original case, SAM 1029. The instrument and its case are similar to flutes stamped “\$” found in the collections of the Graz Landeszeughaus and the Museo Civico in Merano.⁸ The Graz instruments, which survived in a military context, probably represent the type of instruments played together with drum in the sixteenth century.

Based on the similarity of this flute and its case to the “\$” instruments, we can assume that this flute is indeed a military instrument. It is a small flute in g at A=415Hz, and has thin walls and rings on each end, serving a double purpose of decoration and protecting its thin ends from splitting. A reconstruction of this instrument shows that it plays very well with ordinary renaissance fingerings, and has a range of two and a half octaves.

⁸ For a fuller discussion of the “\$” instruments see: Boaz Berney “Renaissance Transverse Flutes: A Re-examination of the Surviving Instruments” in: *Musique de Joye: Proceedings of the International Symposium on Renaissance Flute and Recorder Consort*, Utrecht, 2003, pp 64-65. The Graz instruments are described in Georg Stradner, *Die Musikinstrumente in Steirmärkischen Landeszeughaus in Graz*, Graz 1976. A drawing of the Merano flute is in Filadelfio Puglisi: *The Renaissance Transverse Flutes in Italy*, Firenze (S.P.E.S) 1995, pp. 85-87.

Three flutes by “Deterdingen”, S- Stockholm: AM. 084933-8

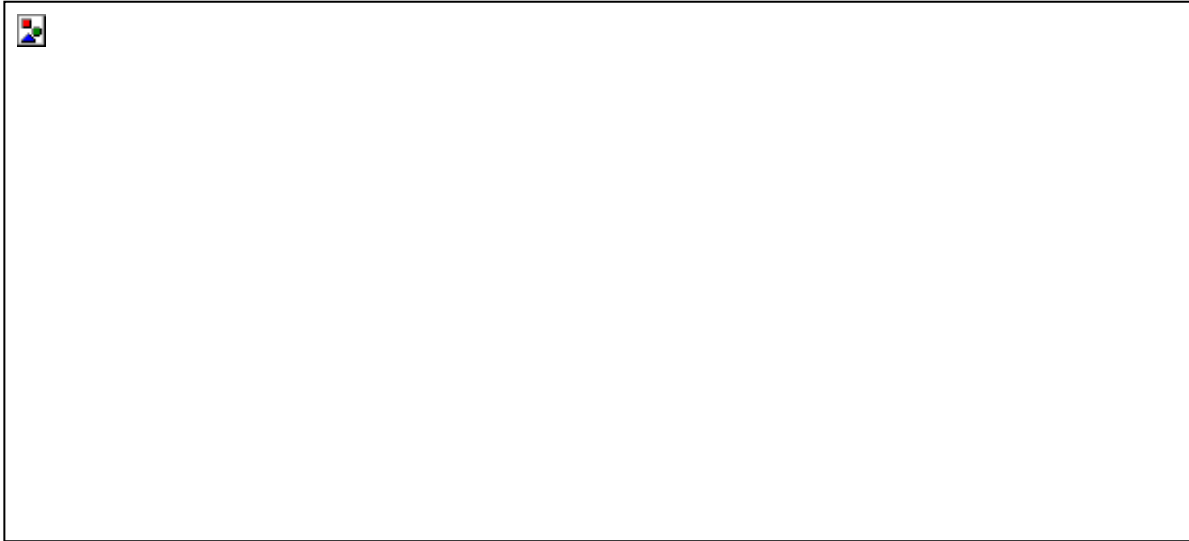


Fig. 6: Four of the six surviving flutes in the Stockholm Armée Museum (from top to bottom: 084938, 084933, 084935 and 084936), Photo: B. Berney.

These little-known flutes (figure 6) survived as part of the Swedish State Trophy Collection, now housed in the Stockholm Armée Museum. This collection contains about two hundred musical instruments, predominantly kettledrums, but also including some twenty-five Russian zurnas (shawm-like double reed instruments), a couple of field drums and these six flutes.⁹ The collection itself can be dated back to the seventeenth and early eighteenth centuries, a period when Sweden was an important military power involved in succession of conflicts, from the Thirty Years War during the first half of the seventeenth century to the Great Northern War at the beginning of the eighteenth century.

The six surviving flutes in this collection are all cylindrical, renaissance-type instruments in d', pitched around A=460Hz. Three flutes, nos. 084935, 084936 and 084937 are stamped “(three crowns)/Er. Deterdingen”. No information was found about this maker, although the three crowns would hint at a Swedish origin. It is unclear how instruments with a Swedish emblem ended up in the trophy collection, unless they were re-gained trophies. The two flutes nos. 084933 and 084934 are anonymous, and are quite similar to one another. The last flute, 084938, has ornamental rings similar to those found on the Russian Zurnas in the collection, and can probably be associated with those instruments, all taken a battle in 1703.

A replica of the Deterdingen flutes show that these were extremely powerful instruments. It is easy to imagine this kind of flute playing in battle next to a drum, its thick walls and relatively large embouchure makes its sound loud and projecting. The replica has a range of more than two octaves with renaissance fingerings.

⁹ Hans Riben, *The Musical Instruments in the Swedish State Trophy Collection in In Hoc Signo Vincas: A Presentation of The Swedish State Trophy Collection*, Halmstad 2006, p. 149-158.

Fife by Sattler, D-Berlin: MIM 2714



Fig. 7: D-Berlin: MIM 2714, Photo: Berlin Musikinstrumenten museum.

This fife, found in the Berlin Musikinstrumenten museum, is a much later instrument (figure 7). It was made by the Leipzig maker Carl Sattler (fl. a1788-p1796) in the late eighteenth century.¹⁰ It is a small instrument in g' at about A=460Hz representing the type of instrument made in Germany and Austria towards the last quarter of the century. Similar surviving instruments can be found several collections, including six in the Graz Landeszeughaus.¹¹

Unlike the other two types of originals, this flute has a conical or a proto-conical bore, as can be seen in figure 8.



Fig. 8: bore graph of D-Berlin: MIM 2714, Photo: Berlin Musikinstrumenten museum.

Although the bore of this particular original is not very regular, as it has several repaired cracks which distort the original bore profile, the shape of the bore can be reconstructed (red line) and compared to similar bore dimensions found on the Graz flutes.¹² The bore is cylindrical for about the first third, much like an ordinary baroque flute, and narrows down right before the first finger hole. It stays more or less cylindrical until right after the last finger hole, and then opens up again. This type of bore, although much less conical than most flutes of the time, would enable the player to play the second octave with the same fingerings as the first.

¹⁰ William Waterhouse, *The Langwill Index*, p. 345. I am grateful to Björn Kempf of the Berlin Musikinstrumentenmuseum for providing me with photos and measurements of this instrument.

¹¹ Georg Stradner, *Die Musikinstrumente in Steirmärkischen Landeszeughaus in Graz*, Graz 1976, pp. 15-17.

¹² *ibid.* The average bore of the Graz fifes has a maximum of 13.5mm at the top, and a minimum of 11.5-12.5 at the bottom.

Repertoire

In order to decide what type of fife we would need for the Grande Écurie project, we next had to examine the extent music that calls for the fife in sources associated with this establishment. Unfortunately, not a lot of fife music has survived, far less than what we have for the field drums, which is possibly an indication of the precedence of drum patterns over the melodies played by the fifes to accompany those. Two pieces for fifes can be found in the “Philidor Manuscript”, one of the main sources for music used at the Grand Écurie (*Partition de plusieurs marches* F-Pn Rés. F. 671).

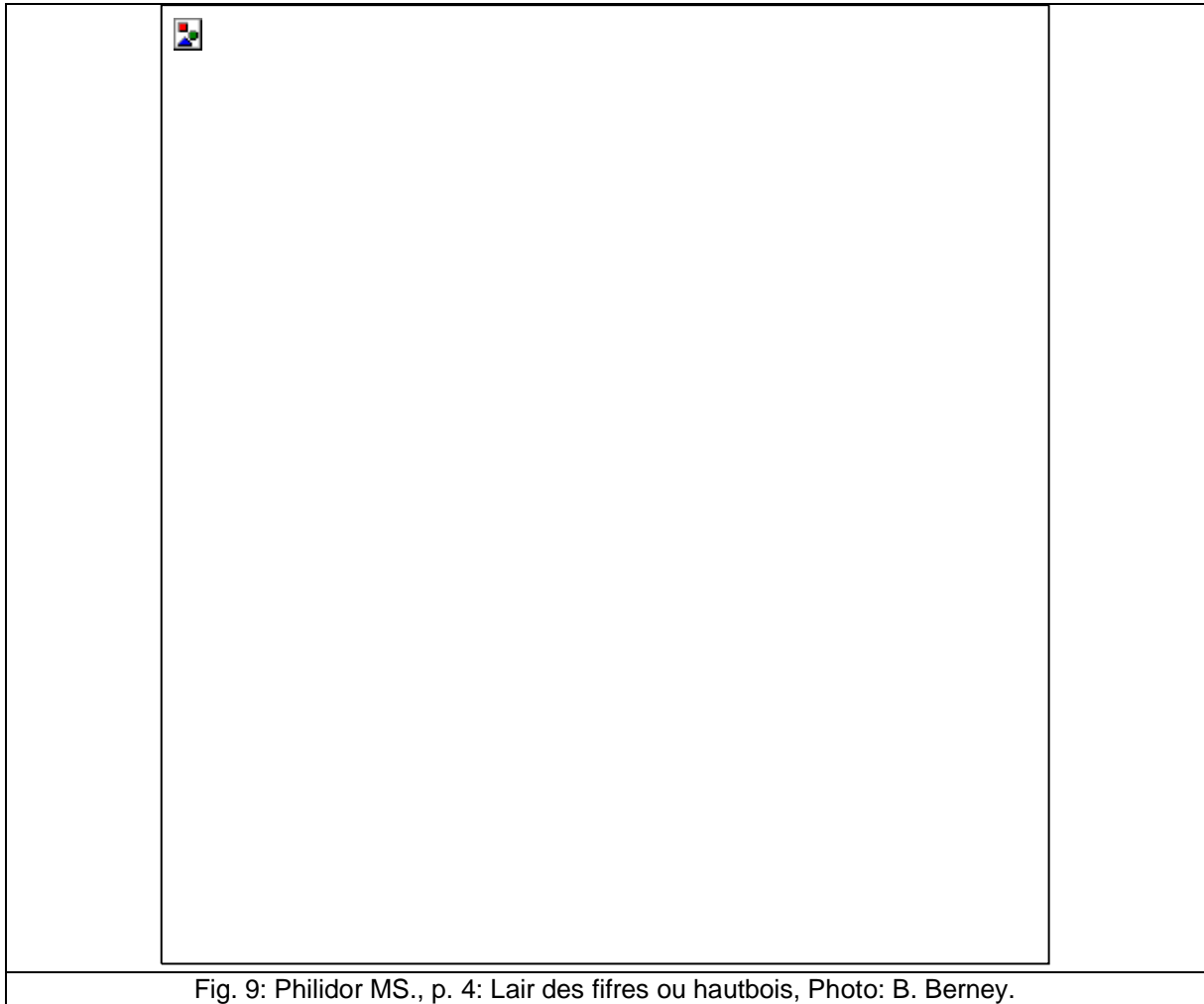


Fig. 9: Philidor MS., p. 4: Lair des fifres ou hautbois, Photo: B. Berney.

Both pieces are similar to fife signals found in Thoinot Arbeau’s treatise, *Orchésographie* as well as in Byrd’s keyboard piece *The fife and the droome*.¹³ As Arbeau states, this kind of signal was improvised by fifers over a standard drum pattern in order to communicate different commands to the troops. From the similarity of these three sources, however it seems like this was becoming more or less a standard tune played by fifers in the sixteenth and seventeenth centuries.

¹³ Thoinot Arbeau, *Orchésographie et traicte en forme de dialogue...*, Langres 1588. William Byrd, *The Battle* MB94. Modern ed. in *William Byrd: Keyboard Music I*, ed. A. Brown, MB, xxvii (1969, rev. 2/1976).

The first piece, *Lair des fifres ou hautbois* (figure 9) is a four-part setting of such a signal, while the second, *Lordonanse pour le fifre* (figure 10) has no accompaniment and is almost identical to the signal found in Arbeau's treatise. Both pieces are a bit like antiquated oddities in the context of the Philidor manuscript and could represent the traditional repertoire played by Swiss fifers from as early as the sixteenth century. It is highly unlikely that fifes could have played all four parts of the *Lair des fifres ou hautbois*, but they could easily have played the top two parts. The piece is possibly a late seventeenth century arrangement of fife music for an oboe band, as oboes were slowly replacing the place of the fifes in the Grande Écurie.¹⁴



Fig. 10: Lordenanse pour le fifre from the Philidor manuscript, Photo: B. Berney.

A slightly later source for fife music can be found in *Instruction des Tambours et Diverse Batteries de L'Ordonnance*, of 1754. This manuscript contains a collection of standard drum signals for infantry troupes (figure 11).¹⁵ All are accompanied by a melody for *Hautbois ou fifre*. Some of the signals found in the manuscript, like *La Générale de la garde Française* can be found in the Philidor manuscript as well. Interestingly enough, while the drum signals are almost exactly the same, the patterns are accompanied by completely different melodies in the two different sources. *La Générale* is followed by a four part *Lair des hautbois fait par Philidor lainé* in the Philidor manuscript, while it is accompanied by a slightly more modern sounding melody in the *Instructions*. This reinforces Arbeau's statement that the drum patterns are much more important than the melody played on the fife to accompany them. It is therefore not inconceivable that the melodies would have been "updated" to something more fashionable over the course of the roughly fifty years separating the two sources.

¹⁴ See Bruce Haynes, *The Eloquent Oboe: A History of the Hautboy from 1640-1760*, Oxford 2007, pp. 53-54.

¹⁵ Marguery [père]: *Instructions des tambours et diverses batteries de l'ordonnance*, S.I.n.d. (gravé par Melle [Marie-Charlotte] Vendôme) 1754.

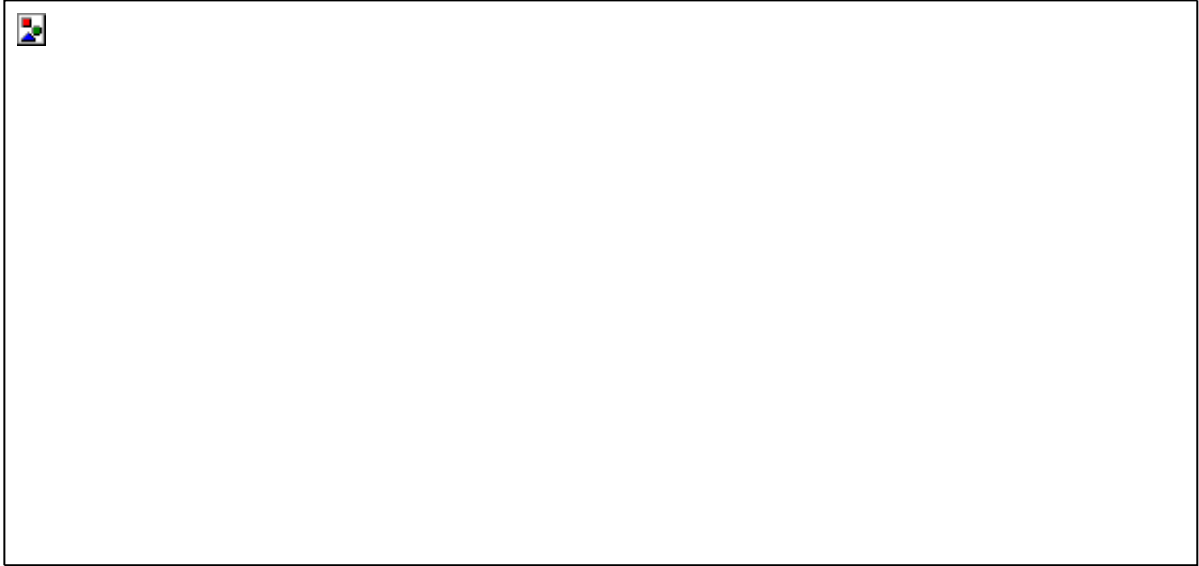


Fig. 11: Instructions des Tambours et Diverse Batteries de l'Ordenance, (1754) p. 5,
Photo: B. Berney.

The nine fife tunes in this source are all in the key of g, seven in major and two in minor, and require a range of octave and a half (g-d'). Table 2 sums up the surviving repertoire discussed so far and the range of the different pieces.

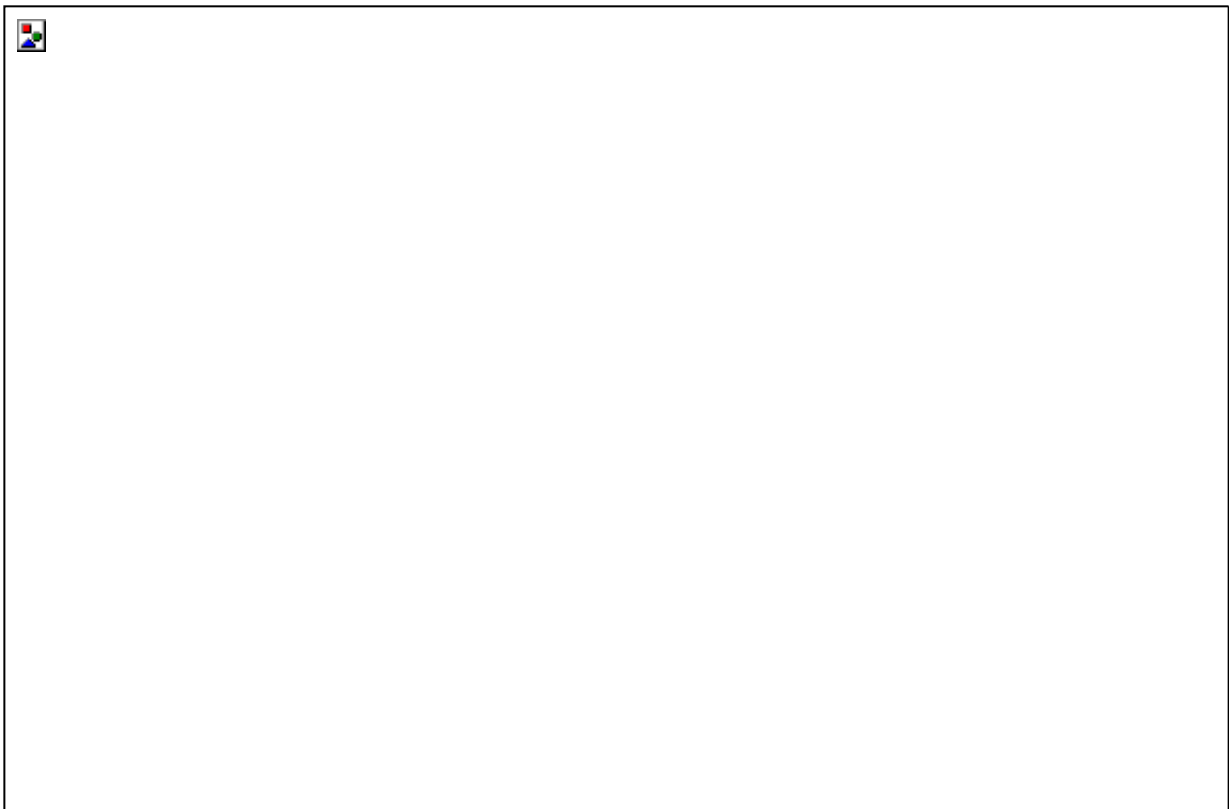


Table 2: French eighteenth-century sources of fife music, © B. Berney.

As can be seen from the table, the pieces listed can, for the most part, be played on either a d or a g instrument up the octave. The only exception is *Lair des fifres ou hautbois* which would work better on a g instrument, as it is too high to be played on a d instrument up the octave or two low as written.

Reconstructing the fifres

As discussed earlier, because of the lack of surviving instruments from the period in question, we had to make a decision about which type of fife to reconstruct for the project. This would be based on the sources found during our research: music, iconography and surviving instruments. Eventually, two main questions had to be answered before we could make a decision about the type of *fifre* to copy:

- **What size fifes should we use for the project?** As our research shows, both d or g flutes could have been used in the Grande Écurie. Iconographical sources seem to indicate a transition to shorter instruments over the course of the seventeenth century, so a g instrument seemed like a better choice for playing the repertoire chosen for the project.
- **Bore profile: cylindrical or conical?** This question would also imply what fingerings would be used on the instruments, renaissance, or baroque? The second half of the seventeenth century was an important period of changes for woodwinds and for flutes, marked the transition from cylindrical to conical bores. Early conical bored flutes were not only found at the French court, but makers and musicians associated with the court, like the Hotetterres and Philidors are the ones credited with the change and the invention of the new baroque woodwinds. Therefore it is not unlikely that the design of fifes have also been changed at that point, although, unfortunately we don't have any surviving instruments that would support this hypothesis.

Eventually, copies were made of all three "candidates" of surviving fifes: A d flute, copied after one of the Stockholm Deterdingen instruments, and two g instruments, one copied after the Vienna Alteklingen flute and another after the Berlin Sattler. Of all three copies, we felt that the Alteklingen fife was the one that worked best for the repertoire chosen for the project. It was clear sounding and easy to play, even in the third octave. Furthermore, the familiarity of the players with its renaissance type fingerings made it the final choice for the instrument copied for the project. As the original is pitched around A=415 Hz, the final copy had to be scaled up a tone, to bring it to *Ton d'Écurie*, or A=465Hz, the pitch chosen for the other loud instruments participating in the project.



Fig. 12: Three of the fifers participating in the project and the copies. From front to back: Sarah van Cornewal, Richard Robinson and Sylvain Sartre, Photo: Boaz Berney.

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