

ANTIQUÉ TRUMPET MUTES

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A note of clarification seems appropriate. The article clearly states that the mutes in this collection are the type that transpose up one whole step. Based on the literature, both theoretical and the music itself (most notably Monteverdi's Orfeo), this should be the obvious case. However, it seems that most if not all surviving mutes only transpose up a half-step. Don Smithers has informed us that when he tried the mutes in the Prague collection, they only transposed a half-step. Edward Tarr, who is working on an article on these mutes, also had the same experience. Appearing after this article is a critique of the situation by Smithers.

In the music department of the National Museum in Prague there is a collection of 18 antique trumpet mutes. It is a collection unique in the world, as was confirmed by members of the Galpin Society, who saw it in the fall of 1967. By publishing a description of the entire collection, we wish to contribute toward the clarification of questions relating to antique mutes. It is a subject that heretofore has received scant attention in the instrumental literature, due to a lack of relevant material.

For a long time, musicologists have puzzled over certain passages in Monteverdi's operas. In the manuscript notes, these passages appeared like two parallel music streams in keys separated from each other by a major second. The explanations given for such an "oddity" of the times were often almost bizarre. The truth is simple: in order to achieve a more colorful instrumentation and to emphasize the dramatic effect of the orchestral accompaniment, Monteverdi called for muted trumpets. Because the old trumpet mutes raised the fundamental of the instrument by a major second, without transposition the note description seemed like a bi-tonal passage.

Recently, this question was extensively treated by Wilhelm Osthoff in his article "Trombe sordine."¹ He presented a number of proofs for the use of muted trumpets in Monteverdi's operas *L'Orfeo* and *L'Incoronazione di Poppea* (1642), and he also pre-

1. *Archiv für Musikwissenschaft* XIII, 1956, 77-95.

sented other examples of the use of muted trumpets in chamber music (the sonatas of Marco Uccellini,² Maurizio Cazzati³ as well as in cantata music.⁴

In the 16th century the use of mutes was limited to the area of music for special occasions. Trumpeters put on mutes during funeral ceremonies and for certain types of military signals. Osthoff cites a number of examples connecting mutes with funeral ceremonies. The earliest evidence, from a fragment of the biography of Piero di Cosimo,⁵ dates from the years 1511-1512. In the first half of the 17th century, thanks to Monteverdi, mutes begin to penetrate into orchestral practice. Toward the end of the 18th century, Johann Ernst Altenburg listed the following five functions of a mute:⁶

1. When an army wants to move away quietly, so that the enemy will not be aware.
2. At funeral services and interments.
3. Daily practice (with the mute) will result in a good and durable technique; and
4. Many (mutes) have the advantage that one will not perceive the sound as being so shrill; and also, one
5. Can adjust (the pitch) to music in many keys.⁷

Musical theorists, too, began to include information about mutes relatively early.

2. M. Uccellini, *Sonata over Canzoni da Farsi a violino solo et Basso continuo*, op. 5. Venezia 1649. In the case of this composition there is an inscription "Tromba..." [Smithers, in *The Music & History of the Baroque Trumpet before 1721*, 2nd ed., Carbondale, 1988) points out that the piece is for violin in imitation of a muted trumpet.]

3. M. Cazzati, *sonata a due tre quattro e cinque con alcune per Tromba ... op. 35* Bologna 1665. Osthoff supposes that the sonata "La Caprara" was written for muted trumpet.

4. D. Buxtehude, "Auf Stimmet die Saiten" (1672) and "Ihr lieben Christen freut euch nun" (the 1680s).

5. G. Vasari, *Le Vite de piu eccellenti pittori, scultori e architetti ...* Vol. VII, Firenze 1851, 116. Cited by Osthoff 86-87.

6. J. E. Altenburg, *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst...* Halle 1795, 87.

7. At another point, p. 85, Altenburg figured out the tuning of the trumpets and stated that a trumpet tuned to A is possible only if we use a trumpet tuned to G with the mute raising the fundamental. From other sources we know that whenever it was not necessary to raise the fundamental, the players would place a short object between the mouthpiece and the pipe which lowered the fundamental by a major second, and thus return the tuning to its original setting.

The first of these was Marin Mersenne, who wrote in 1635 in his book *Harmonicorum libri XII* as follows:

Meanwhile I add that a wooden tubule, (β) can be driven into the mouth of the trumpet, which the French call Sourdine, because it makes the sound softer (surdior) and more dispersed, or weaker because, obviously, it makes the hollow of the bell more narrow, since the breath exits only through the hollow of the tubule (β Î). For this reason the hand, grasping the foot of the mute () shoves its head (β Î e) into the bell.⁸

In Mersenne we also find the first illustration of a mute (Fig. 1). A year later, he repeated this information in his book *Harmonie Universelle*.⁹ However, in none of his works did he mention the fact that insertion of a mute raises the fundamental of the instrument. We first find this information in Daniel Speer:¹⁰ "...das man ins Hauptstück stecket/so lautet es um einen Thon höher..." (that one inserts in the bell so that [it] sounds a step higher). Subsequently, this was mentioned in J. Mattheson¹¹ and J. G. Walther.¹² The trumpet was the first wind instrument to be equipped with a mute. In the last quarter of the 17th century, trombonists began to use mutes. Mutes for the French horn appeared only at the beginning of the 18th century. In the last quarter of the 18th century the old mutes begin to disappear. Musicians begin to use mutes that do not change the fundamental. H. Eichborn¹³ credits their invention to the Czech horn virtuoso Josef Hampel.

The antique trumpet mutes were made of wood; paper, metal and other materials did not make their appearance until the turn of the 18th century. By inserting the mute into the bell of the instrument, the player changes the width of the space at the end, thereby raising the tone as well as changing the color.¹⁴ Older writers characterize this color as "pleasantly oboe-like." Altenburg¹⁵ cites three types of mute: "The first is similarly

8. Second part, second book p. 108. Cited by Osthoff, first part p. 80. The designation by Greek letters refers to the illustration. See note 9.

9. Paris 1636, Paris 1965. About the mute see pp. 259-60, third part. Illustration on pp. 260 and 267.

10. *Grund-richtigen Unterricht der musikalischen Kunst*, Ulm 1697, p. 219.

11. *Neu-Eröffnet Orchester*, Hamburg 1713, p. 266.

12. *Musikalisches Lexikon...* 1732, p. 619, subject: *Tromba sorda*.

13. *Die Trompete in alter und neuer Zeit*. Leipzig 1881, p. 96.

14. Acoustically this is the same phenomenon as, for example, horn hand stopping.

15. *Versuch einer Anleitung...* 86-87.

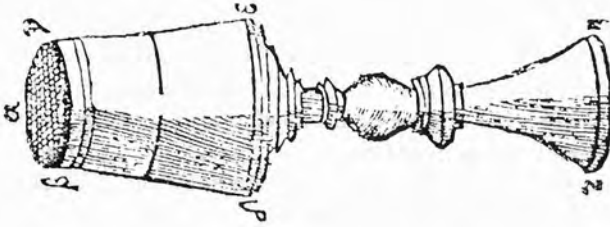


Figure 1
Mersenne



Figure 2



Figure 3

narrow at both ends; the second almost resembles a bell or shawm at one end; and the third type has an end in the shape of an oboe or clarinet where, at the opening one can adjust several small wooden rings that can be inserted or removed at will to make the sound stronger or weaker, producing a unique effect when one plays together with others instruments.”

In the collection of the music department of the National Museum there are mutes of two types: 1. one-sided; 2. two-sided. All the mutes are made of wood, and all of them raise the fundamental by a major second.

The antique trumpet mutes are composed of three parts. The body that enters the bell usually has the form of a cylinder with a narrow part. With the older types, the sides of the bowl (korpus) are either concave or convex. Such mutes stick better to the wall of the trumpet bell. The two extreme (outermost) parts are connected by a throat. the bore of the throat is narrow (around 4-10 mm.). The throat was always decorated by carved rings, 20-35 mm. broad, which in addition to a decorative function, give support and reduced the possibility of breakage. The bowls of the mutes are different in two types. The one-sided mutes end in a short bell (33-40 mm. long) that by its shape is reminiscent of a brass instrument mouthpiece.¹⁶ Further on in this text I call it a pseudo-mouthpiece. The bowls on each end of the two-sided mutes are very similar. They have the shape of an acute cylinder with slightly altered dimensions from the other end.

It was possible to insert this mute into the bell by either end. It is possible to differentiate the two ends from each other only when the mute is actually in the instrument. The throat of the two-sided mute was shorter than the one-sided mute but it also has the decorated rings. According to the appearance, material and overall workmanship it is possible to classify the mutes into several groups. Each group represents one model or possibly a single manufacturer.

I. E929, E934, E935

II. E939, E931, E937, E932

III. E254, E256

IV. E930, E938, E933

The remaining mutes which don't fit into these groups are unique. As far as the origin of the mutes, one cannot say with any certainty. The mutes E253, E256, E257 are designated by the inscription "Vamberk," which partially points to their origin.

Remarks to the description

In view of the different arrangements of the two types of mutes, the one-sided and the two-sided mutes are described separately. In case of the one-sided mutes, I give the

16. For that reason, the mutes were also considered in the old inventories of the old museums as a kind of indetermined mouthpiece.

following dimensions:

- a. total length of the mute
- b. length of bowl (korpus)
- c. maximal outer diameter of bowl
- d. internal diameter of opening of bowl
- e. diameter of bore of throat
- f. inner diameter of external opening
- g. outer diameter of external opening (diameter of outside of the edge of the pseudo-mouthpiece)

In addition I describe the type of material, and the shape of the pseudo-mouthpiece (using the terminology common in describing mouthpieces). In my notes, I cite special signs. For the two-sided mutes I give the following dimensions:

- a. total length of mute
- b. length of longer bowl (korpus)
- c. length of shorter bowl
- d. maximal outer diameter of the larger bowl
- e. inner diameter of the opening of the larger bowl
- f. diameter of bore of the throat
- g. inner diameter of the opening of the shorter bowl
- h. maximal outer diameter of shorter bowl.

On the following pages I give the types of material and special signs.

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ONE-SIDED MUTES (dimensions in mm.)

No.	a	b	c	d	e	f	g	Wood	Pseudo-mouthpiece shape	Remarks
E253	124.5	66.8	42.8	24.3	6.7	29.3	37.2	beech	Shallow cone with longer cone-like opening inside	On the corpus is an older inscription "Primo" and a more recent inscription "Vamberk"
E254	141.0	71.0	41.5	30.0	7.4	32.5	40.8	walnut	Deep cone with narrow edge	Corpus inscription "Vamberk"; decoration on throat slightly damaged
E255	143.0	55.9	35.8	25.5	5.9	31.0	35.7	walnut	Very deep, funnel-like, edge narrow	Mouth of corpus is chipped
E256	140.4	65.4	42.1	?	7.3	25.0	36.6	walnut	Deep cone with a medium edge	Mouth of corpus broken off. Decoration of throat damaged, corpus inscription "Vamberk"
E257	138.8	54.6	41.4	?	4.0	32.2	40.8	basswood	Very deep, funnel-like, with narrow edge	Corpus slightly rounded off. Mouth of corpus and pseudo-mouthpiece partly broken. Inscription "Vamberk"
E930	157.0	70.2	38.1	24.6	5.0	31.4	40.3	Brazilian	Very deep, narrow edge	Mouth of corpus chipped; decoration of throat damaged
E931	150.0	81.6	39.8	25.2	5.0	21.2	34.6	walnut	Shallow cone, broad edge	Decoration of throat damaged. Mouth of corpus damaged. A sign has been cut into corpus
E932	150.0	83.9	39.2	27.8	7.1	20.6	33.8	walnut	Shallow, funnel-like cone, broad edge	Slight damage to decoration of throat
E933	158.0	71.5	40.6	25.4	5.4	30.2	36.6	Brazilian	Deep cone, narrow edge	Corpus slightly rounded off, mouth partly broken
E936	?	67.7	40.0	24.5	6.8	?	?	walnut	?	Pseudo-mouthpiece is missing
E937	149.5	83.0	36.9	26.1	4.9	19.9	34.5	walnut	Deep, funnel-like with broad edge	Mouth of corpus chipped
E938	155.5	67.6	40.8	24.6	5.5	30.0	39.0	Brazilian	Deep cone, narrow edge	Corpus is rounded off, throat slightly damaged
E939	147.0	82.9	39.5	28.2	4.8	22.6	34.8	walnut	Deep funnel, edge broad	A sign carved into corpus
E940	138.5	64.0	43.4	22.8	9.7	25.2	37.6	beech	Shallow cone broad edge	Corpus barrel-shaped
E941	140.1	60.4	36.2	27.3	5.2	26.1	35.4	maple	Deep cone, broad edge	Corpus slightly rounded off

TWO-SIDED MUTES

No.	a	b	c	d	e	f	g	h	Wood	Remarks
E929	151.0	57.2	52.8	44.8	26.6	5.3	25.0	42.2	oak	Mouth of smaller corpus damaged
E934	151.0	57.2	54.3	45.7	27.6	5.4	25.6	42.7	oak	Mouth of larger corpus damaged
E935	154.0	61.4	56.2	42.2	25.0	6.0	27.8	41.6	maple	