HISTORICAL INSTRUMENTS

Russian Bassoons and Bass Horns: A Comfortable Uncertainty

BY CRAIG KRIDEL

Since its inception in 1992, the Historical Instrument section has sought to address topics of interest to low brass players and researchers. The column never set out to present mere factual accounts in what could be called Dragnet history ("just the facts, ma'am") or long-winded book reports reciting a litany of scholarly bits whirled into a potpourri of general knowledge (much like many of today's Wikipedia entries). Also avoided was the academic's authoritative voice of "here is how it is." Yet, as I reread my treatments of serpents and bass horns compiled through the years, a sense of certainty does at times appear between the lines, an assuredness that I never intended.[1] Thus, I wish to reconsider the Russian bassoon, also known as the *basson russe*, as a way not to revise my *ITEA Journal* essay of long ago but, instead, to display the uncertainty—the comfortable uncertainty—that is inherent in any quest to understand these misunderstood instruments.[2] History is not neat, truth can indeed change, and dilemmas arise but, often, can never be fully resolved. That's a way of life when exploring these horns. Russian bassoons, as well as all serpents, prove to be a good object lesson to highlight some of these conundrums.[3]

A comfortable definition; an uncomfortable reality

Various descriptions of the Russian bassoon exist, often opening with the common quip—"'tis neither Russian nor a bassoon," (similar to the English horn jest—neither English nor a horn).[4] A standard encyclopedia entry typically describes the instrument (*serpent droit*) as emerging in 1789, consisting of three-to-four sections, with or without a detachable dragon's head, and a coiled or swan-shaped bocal.[5] J. J. Regibo of Lille, France is attributed as the inventor of this six finger-hole, three key, upright-straight serpent, claiming that the horn produced more sound and was easier to play than the military serpent. The etymological origins of basson russe remain a mystery, thought to have been either a linguistic evolution caused by the instrument's use in Russian and/or Prussian military bands (perhaps an adaptation of "basson prusse") or a variation on the name of a renowned maker (Rust).[6] As with Handel's damning remark upon first hearing the military serpent, Russian bassoon descriptions often include Hector Berlioz's condemnation that the horn "could be withdrawn from the family of wind instruments . . . without the least damage to art."[7] Such a portrayal is accurate enough for any introduction and, certainly, extensive enough for those readers skipping through an array of historical low brass encyclopedia entries. Yet, the world of serpents becomes a mystifying place when all of its family members come together and quite perplexing to organologists who seek to bring some sense of order to the naming and classification of various instruments.

***Basson russe* by Sautermeister (photo courtesy of Paul Sherman)**

Problems arise not from the definition, per se, but with the general identification of upright serpents. During the late 18th and early 19th century, much experimentation with low brass instruments occurred. Designers were creating many types of horns as they sought to solve intonation problems caused by a long air-column altered with fingers and keys rather than with valves. In later years when these serpents were long retired and relegated to museums, the term "Russian bassoon" easily

Bassons russe by Dubois & Couturier, Tabard, and Sautermeister

identified those instruments with distinctive zoomorphic bells but, also, became a generic designation, encompassing many types of horns with conventional metal or wooden bells. And, since these upright serpents were designated by museum curators before any coordinated effort among organologists to construct a common taxonomy, identifications of the serpent's family and species became somewhat muddled.

I was contacted this past year by a distinguished bassoon scholar who, in the midst of his research, was attempting to reconcile why two of three non-dragon-headed upright serpents, from separate collections, were identified as bassons russe and the third was not.

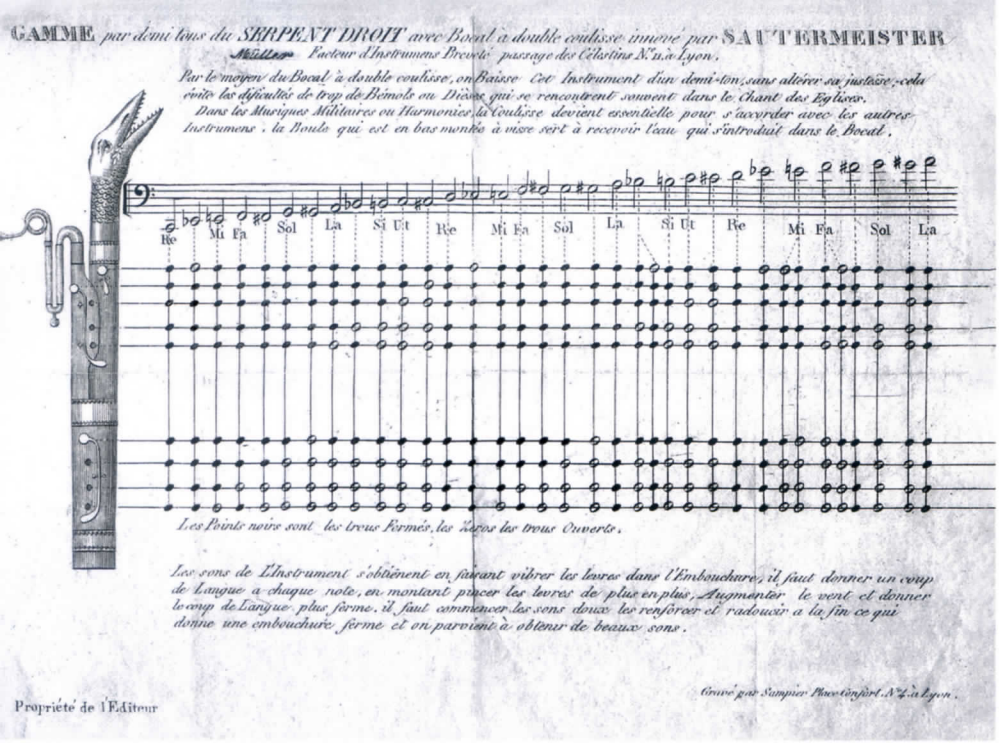
Taxonomies and nomenclature in the world of aerophones cry out for order; yet, serpents prove to be culprits among labrosones, i.e., the current terminology for brass instruments.[8] A search of the Musical Instrument Museums Online data base will show a variety of horns deemed as Russian bassoons.[9] Unfortunately, identifying bassons russe is not all that remains perplexing within the world of bass horns.

Bass horn player by Alexander I. Sauerweid (Russia, circa 1815)

Fingering charts: Fact or fiction

The British Museum has among its holdings an arrayed collection of fingering charts for upright serpents.[10] They are fraught with oddities as one begins to view the charts not as a visual curiosity but for their intended purpose, namely—as an actual guide for producing specific pitches. General consensus does exist among the charts for notes of the six open holes, although even those depictions can prove confusing. Some upright serpents (e.g., the English bass horn and many bassons russe) have their six open fingerholes on the descending column (the wing joint and the descending portion of the boot joint), while others (typically serpents Forveille, ophimonocleides, and some bass horns) have the three, left hand fingerholes on the descending wing joint and the lower three, right hand fingerholes on the ascending portion of the boot joint. This causes the right-hand fingering to be inverted (much like playing the serpent d'église in a "palm up," English style).[11] Yet, the charts display the same fingerings for both groups of instruments. Interestingly, the traditional fingering pattern still works well for my upright serpents with (inverted) 4th, 5th, and 6th fingerholes on the ascending air-column, calling into question the importance of shortening the air-column versus venting "interior" fingerholes to obtain proper and centered pitch.

Charts begin to vary when finger keys are added which, of course, seems reasonable since these closed keys appear at different locations on the air-column.[12] For the upper second octave and third octave notes, fingering patterns become idiosyncratic. A fingering chart for an upright serpent similar in appearance to those made by Sautermeister does not correspond to the fingering of third octave notes on my Sautermeister basson russe.



Heral, Methode du serpent-basson dit serpent droit, from S. Richault,* Tablature du serpent dit forveille *(Paris, 1830?)

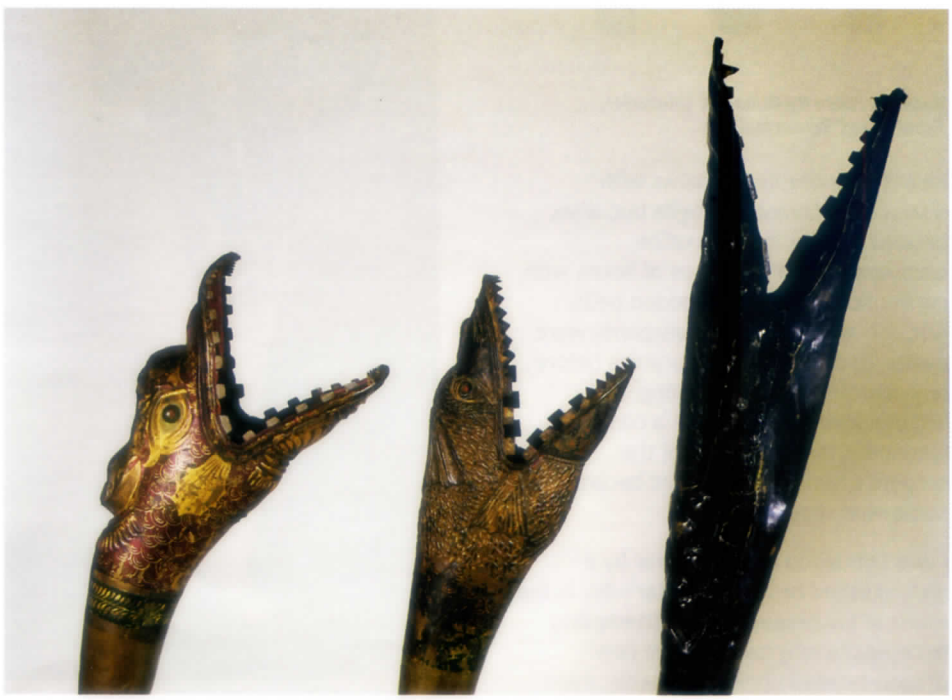
The chart—published by Heral and designated for straight serpent and serpent basson[13]—offers helpful guidance in the lower register; yet, as I enter the upper register, as is the case for all of my other serpents and bass horns, fingerings are not predefined on any chart and vary according to various factors. Increasing or decreasing the diameter size of the mouthpiece changes individual fingerings as also occurs when the instrument warms during a playing session (fingerings for third octave Es and Fs can change after 45 minutes of play, and a larger rim diameter narrows the harmonic series, lowering the fifth harmonic, and altering its fingering). This is all to say that fingering charts are charming in their own way and, as serpent iconography, provide nice wall hangings for collectors; however, for players who are in quest of that clear third octave F or a focused third octave Eb, actual note designations fall more into the realm of fiction than fact.

The sound of the horn: A tale of two mouthpieces

Can an accurate description of the basson russe's sound (or any serpent's, for that matter) be added to our introductory encyclopedia entry? Attempts abound from the positive to the damning—from Thomas Hardy's "a good old note: a deep rich note" serpent eulogy to Berlioz's view that the serpent d'église was more appropriate for pagan rites than to be used in the Catholic Church (or Charles Burney's comparison of the instrument to an angry Essex calf, often proven true by today's well-meaning enthusiast who blows the horn's fundamental note as loud as possible).

Originally conceived to accompany voices in the singing of mass, by the mid-18th century, cathedrals throughout France employed one-to-two serpentists and, by the late 18th and early 19th century, bass hornists were members of harmoniemusik ensembles, military bands, and orchestras, typically doubling the bassoon parts. One would think that the instrument's sound served some specific purpose in these roles; however, determining the serpent's timbre remains mysterious since its fate has been one of service rather than stardom—to blend with voices and to enhance the volume of the bassoons. Yet, rarely, if ever, is the serpent's actual sound described as voice-like or bassoon-like. Isn't it ironic that one of the most conspicuous-looking instruments proves to be one of the more inconspicuous sounding?

In the search for an acoustical description, however, another problem arises concerning one of the most defining aspects, if not *the* most defining, of any instrument's sound—the mouthpiece. The serpent's "mouthpiece enigma" looms large while seeming unacknowledged by many modern players.[14] Mouthpiece frothing remains an enjoyable pastime for most brass players—whoops, players of labrosones—although mouthpiece filibusters typically focus on rim width, cup profile, and the "feel on the face."



Basson russe bells: (left to right) Dubois & Couturier, Sautermeister, Tabard

Matters of timbre and "authenticity" of tone may arise but, from my observations, such a turn of topics occurs only after many, many minutes (or hours) of excruciatingly-detailed discussion. Nonetheless, ascertaining a "proper" sound for the serpent becomes crucial and difficult because two distinctive types of historical mouthpieces exist—a hemispheric cup-shaped mouthpiece with a sharp throat creating an "airy" tone, and a more soft-throated, slightly oval-shaped mouthpiece producing a less airy and more, I dare say, "brass-like" (relatively speaking, of course) sound. Conventional wisdom maintains that the hemispheric, sharp-throated mouthpiece served the horn in its original role to accompany voices, and the more soft-throated cup became the mouthpiece used in the late 18th-early 19th century for military and orchestral playing. An additional explanation has emerged recently: the soft-throated mouthpiece allows the player to produce greater volume of sound, crucial for the serpent in its ensemble role. "Hope springs eternal," and this recent rationale holds great merit as acousticians enter the conversations.

Yet, many upright serpents used in those late 18th-early 19th century ensembles were fitted with sharp-throated mouthpieces, thus questioning our conventional wisdom.[15] Further, when I play in a period, early 19th century chamber orchestra and harmoniemusik ensemble with a serpent made by Forveille, a Sautermeister basson russe, a Darche serpent Forveille, an anonymous French bass horn, and an unsigned English bass horn, all with their sharp-throated mouthpieces, I can produce just as much volume as when using a soft-throated mouthpiece and, clearly, sharp-throated mouthpieces allow the instruments to blend better with bassoons.[16] Uncertainty arises again.

Towards a comfortable certainty

Do not despair—some consensus has arisen in recent years. Serpents and bass horns are now seen as transposing instruments, and the diameter of the mouthpiece may vary in size according to the preference of the player.[17] Determining the fundamental pitch of these horns will continue to be questioned, as will our wonderment with the early cimbasso—perhaps as much for conversation as for a search for truth.[18]

In addition, new information continues to emerge, for example Herbert Heyde's magnificent treatment of serpents and bass horns in Germany, which adds much to our understanding of these instruments throughout Europe. Heyde introduces new perspectives about the Russian bassoon, examining the cultural-political symbolism of the decorative dragon bell (along with the buccin, the dragon-headed trombone) and its pro-Napoleonic and anti-Napoleonic connotations.[19]

I am still left with a sense of comfortable uncertainty as I try to understand the basson russe—both those dragon-headed and sans dragon-headed horns. Such a perspective is difficult to introduce into any encyclopedia entry that would be soothing to the neophyte. Yet, I hope players, researchers, and *ITEA Journal* readers recognize that what has been revealed is not The Truth or an admission of chaos and confusion but the curious oddities and concerns about an interesting group of instruments that cry out for more study and exploration and, perhaps, a tad more certainty.

4x24

Sharp-throated cup mouthpiece from a circa 1830s French bass horn; replica of the sharp-throated cup serpent Forveille mouthpiece tethered to the instrument owned by Bruno Kampmann.

Replica hemispheric cup-shaped serpent mouthpiece and replica oval-shaped serpent mouthpiece

Endnotes:

1. All Historical Instrument Section columns are available for download at **berliozhistoricalbrass.org/itea.htm**
2. These pre-tuba horns should not be viewed as failed instruments or "horns in waiting" for the invention of valves. To admire and to understand serpents is to reject "whig historiography," i.e., portraying an evolution of musical instruments as a march forward on a path of progress.
3. I use serpent as an all-encompassing term for the serpent family, including serpents d'église, military serpents, upright serpents, and bass horns. The terms "upright serpent" and "bass horn" are used interchangeably in this essay.
4. I will be the first to admit that I have used this Russian bassoon remark, always eliciting a smile.
5. Sections include a wing joint and an end boot joint similar to the reed bassoon, a conical bell column (bass joint) with or without a detachable dragon's head or metal bell, and a bocal.
6. Thierry Maniguet, "Les formes derivees du serpent dans la premiere moitie du XIX siecle," Cecile Davy-Rigaux, Florence Getreau, Volny Hostious (eds.). *Musique-Imagers-Instruments: Le serpent: Itineraires passes et presents* (Paris: CNRS Editions, 2013): 181-200.
7. George Frideric Handel is reported to have said, upon hearing the serpent for the first time, "Aye, but not the serpent that seduced Eve." Clifford Bevan, *The Tuba Family*, 2nd edition (Piccolo Press, 2000): 105. Hugh Macdonald, *Berlioz's Orchestration Treatise* (Cambridge University Press, 2002): 244. In fact, Berlioz's inclusion of the "Russian bassoon" in *Grand traite d'instrumentation et d'orchestration modernes* (1844) may have greatly popularized the term for later use.
8. The term "labrosone" arises from the Latin and Greek roots for lip and sound.
9. See Musical Instrument Museums Online database at **mimo-international.com**
10. S. Richault, *Tablature du serpent dit forveille* (Paris, 1830?), system number 004691779, BLL01004691779; The British Library, London.
11. English bass horns and many bassons russe (in C) produce their first and second octave Ds by closing toneholes 12345 and opening the 6th tonehole with the right hand-ring finger. This is the same fingering on serpents Forveille fingering charts (12345), too; however, the bottom finger hole that is to be opened by the right hand-ring finger actually opens the 4th tonehole and should produce an E. Go figure!
12. While positioning varies, finger keys remain somewhat consistent among the serpent family, producing the B natural, F sharp, and C sharp notes (for instruments in the key of C).
13. The words "basson russe" do not appear on the fingering chart, which I had expected. What I did not expect was the elementary nature of the text, informing the reader that "the sounds of the instrument are obtained by vibrating the lips in the mouthpiece."
14. I do not cast aspersions on those serpentists who play with a modern trombone mouthpiece. One does not sign an oath to historical authenticity when purchasing a serpent, and the vitality of any horn rests, in part, with those practitioners who are exploring its far-reaching capabilities. However, there is a significant difference in sound. During the 1970s when historical brass players sawed off the bells of early 19th century, pea-shooter trombones so that they could be used as sackbuts, those instruments were called trombuts. Similarly, shouldn't serpents with modern trombone mouthpieces be called serbones?
15. Serpents in museums are often displayed with non-serpent mouthpieces, making the quest for historical accuracy even more difficult. One confirmed serpent Forveille mouthpiece, tethered to an instrument owned by organologist-serpent scholar-collector Bruno Kampmann, is sharp throated. Some designated English bass horn mouthpieces in the University of Edinburgh's Collection of Historical Musical Instruments are also sharp-throated and, in my possession, is a French wooden bass horn whose fitted metal mouthpiece is sharp-throated.
16. I was always perplexed that a sharp-throated mouthpiece on a basson russe, while strengthening the sound of the bassoons, would not blend with trombones; however, the research of Hannes Vereecke and Stewart Carter alleviated my concerns as they pointed out that the early 19th century trombone mouthpiece was sharp-throated, more similar to 17th century sackbut mouthpieces than to today's curved, soft-throated cup profile. Hannes Vereecke and Stewart Carter, "Mouthpieces for Brasswinds in the Writings of Victor-Charles Mahillon," *Historic Brass Society Journal* 26 (2014): 43-61.

17. Transposition is mentioned in Hermenge's *Méthode Elémentaire pour le Serpent-Forveille* (Paris, circa 1825), Berlioz's *Grand traite d'instrumentation et d'orchestration modernes*, and reasserted by Clifford Bevan, "French Serpent Notation—Part 1, Part 2," *ITEA Journal* 45:3 (Spring 2018): 48-55; 45:4 (Summer 2018): 48-52. Thoughts of diameter size stem from Hermenge's comments, "[the mouthpiece] can nevertheless vary in dimensions, according to the lips of the performer."

18. Fundamental pitch is complicated because bocals for most upright serpents have tuning slides that allow the pitch to be changed between A=430 (today's agreed upon classical pitch) to A=452 (Kneller Hall pitch of the early 19th century) and, for some instruments, the slide can alter pitch up to a minor third and even more. Of course, this also changes the fingering patterns from the published charts. Re cimbassi, see Clifford Bevan, "The Great Cimbasso Mystery," in *The Tuba Family*, 1st edition (London: Faber and Faber, 1978), 212-215. Renato Meucci, "The Cimbasso and Related Instruments in 19th Century Italy," *The Galpin Society Journal* 49 (March 1996): 143-179. Clifford Bevan, "Any More for the Cimbasso?," *TUBA Journal* 23:2 (Winter 1996), 50-53.

19. Herbert Heyde, "The Bass Horn and Upright Serpent in Germany," *Historical Brass Society Journal* 27 (2015): 21-39; 28 (2016): 97-119; 29 (2017): 13-45. Heyde also adds to the conjecture of the origins of "basson russe" by suggesting that specific military campaigns could have influenced the use of the term. Heyde, *HBS Journal* 28 (2016): 104-105.

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