

CHAPTER X.

ON THE FLUTES OF THE ANCIENTS.

301. How sad it is to be obliged to dispel a cherished illusion! Yet must the dictates of stern truth be obeyed, and the much vaunted antiquity of the instrument that we now call a flute must be pronounced, in all reasonable likelihood, a myth!

The flute, as defined in §87, is probably not more than five hundred years old. It bears little resemblance to any of the various kinds of the *αὐλός*, the *tibia* or the *fistula* of the ancient Greeks and Romans, except in so far as that they also were pipes and were provided with finger-holes. It was to these pipes that the irate Le Fevre, the father of the illustrious Madame Dacier, alluded when he exclaimed in his famous ode to Minerva (*Encyclopédie Méthodique*, 1791):

“*At vos perite, vos perite, tibia!*”

They have perished, but from their ashes has arisen that glorious quartet which has so eminently contributed to the advancement of musical art, and without which all orchestral compositions are vapid and colourless, the flute, the hautboy, the clarionet and the bassoon. The three instruments last named had prototypes in very early times; the first was originally represented only by a primitive whistle, which, although it probably led to the invention of the flute, was certainly very different from what we now consider as such. Various modifications of this form of the ancient flute still survive under different names, for though the *flûte-à-bec*, often called the English flute, is obsolete, the common flageolet, the French flageolet and the “penny whistle” still flourish, not to mention the flute-pipes of organs which are akin to them.

302. The only really ancient instrument that appears to have borne any resemblance to our flute, and to have been sounded by the breath of the performer passing, directly from his lips, across a lateral aperture in the instrument, was the Chinese *tsche*, mentioned in §86, and there is no reason to suppose that this was known in Europe. The ensuing description of this instrument is taken from Mendel and Reissmann's Musical Dictionary (1880). The *tsche* is made of bamboo, and shows more progress in acoustical knowledge than the other Chinese flutes. It is a transverse flute, both ends of which are closed. The mouth-hole is in the middle, and on each side of it, at equal distances, are three finger-holes as large as the bore. The Chinese authorities claim great antiquity for this instrument, giving as the date of its origin 2637 B.C.

303. In the *Encyclopédie Méthodique* (1785) there is an able and exhaustive article on ancient wind-instruments, of which I have been unable to discover the author. In this article, the most interesting portions of which I have translated, the author seeks to prove that the flutes of the ancients were invariably furnished with reeds, and if he has not succeeded in establishing the whole of his contention, he has at any rate proved satisfactorily that there is no trustworthy evidence of the existence of any ancient flute without a reed or a mouth-piece of some kind.

304. "In order that a flute may produce a sound it must be provided with an *embouchure* like those of our transverse flutes; a cupped mouth-piece like those of our horns; a sloping mouth-piece like those of our *flûtes douces* [*flûtes-à-bec*, whistles], or a reed like those of our hautboys.

"Of all the writers who have occupied themselves with the antique flutes I do not know of one who has sought to discover whether the ancients possessed all these different species of flutes, or whether they were only acquainted with some of them, and, if so, with which It seems to me, nevertheless, that this subject merits elucidation, a task which I shall endeavour to perform, and I hope to be able to show that the ancients had no flutes without reeds, but that these

were of two kinds, one being an uncovered reed like those of our hautboys, the other being enclosed [like those of bagpipes. See §83].

"It will not be out of place to remark that, according to the testimony of all the Greek and Latin authors, the instrument which the ancients called a flute was a tube pierced with several lateral apertures which were stopped by the fingers, or otherwise, and which served to produce different notes.

"The other wind-instruments were called the horn, *buccina*, and the trumpet, *lituus*; I know but one single exception to this rule, that is the *syrix*, or Pan-pipe. . . .

"The transverse flute does not appear to have been known to the ancients, at all events no author has mentioned it, though they had indeed a flute named *πλαγιάυλος*, that is, oblique. Concerning this verse of Virgil:

"Aut ubi curva choros indixit tibia Bacchi."

Servius remarks: "*Hanc tibiam Græci vocant πλαγιάυλος.*" Now, the ancients added, at the end of their flutes, a cow's horn to augment the sound; this horn was naturally curved, and consequently rendered the flute itself crooked, hence the *curva tibia* of Virgil and the *plagiaulos* of the Greeks. These curved flutes are seen on many ancient monuments.

"Truth compels me to add that I have found a kind of transverse flutes, or rather true fifes, on engravings of two bas-reliefs which are given in Montfaucon's *l'Antiquité expliquée*. The first of these engravings represents Cupid and Psyche borne by centaurs. Cupid holds to his mouth a staff which seems to be a fife, and he is in the attitude of one playing this instrument: between the two centaurs is a Cupid, or winged genius, standing, also playing a fife.

"I suspect this bas-relief to be incorrectly copied. Firstly: Because Montfaucon says positively that the Cupid between the centaurs bears a vase: now, the instrument held by the other Cupid exactly resembles that held by the first, and if this is a vase, the other is also one. Secondly: Because I

have never seen, on any ancient monument, Cupid playing on any kind of flute; winged genii are often represented playing on this instrument, but not Cupid.

"The second of these bas-reliefs, which Montfaucon has taken from Boissard, closely resembles the first, and I believe it to be nothing but a copy of the first, altered by the artist. . . . It should not cause surprise that I have so freely accused, here and elsewhere, those who have copied antique bas-reliefs, of having altered them: I have indubitable proofs that the copyists have erred on many occasions, of which I will mention two of the strongest.

"In Montfaucon's *l'Antiquité expliquée*, Tome I., there is a syrinx composed of eight tubes with sloped mouth-pieces [like those of whistles]. Each tube is pierced with lateral holes; the first two have four each; the next four have three each; the next one has two, and the last has one. . . . A syrinx is never found either with mouth-pieces or with lateral apertures

"In Bartholin's *De Tibiis Veterum* [(1677)] is a representation of a flute-player holding two flutes, each of which has three lateral holes and two small cubical projections or pegs; the same engraving is found in Boissard, though the flutes have neither lateral holes nor pegs, but they are surrounded by rings. One of the two has certainly erred on this occasion, and it is equally likely that the fifes in the bas-reliefs before mentioned are incorrectly drawn, I shall therefore consider myself justified in saying that the ancients had no transverse flutes, until I shall have good proofs to the contrary." The remainder of this article is well worth perusal.

305. Sir John Hawkins (1776) mentions an engraving of large size, published some years before the time of his writing, which professed to be taken from a tessellated pavement in the temple of *Fortuna Virilis*, erected by Sylla at Rome. In this engraving, to which we have no clue, "is a representation of a man playing on a traverse pipe, with an aperture to receive his breath, exactly corresponding with the German flute." This can

scarcely be set down as one of the "good proofs" required by the anonymous author above quoted.

In the works of Scacchus (1637) and Bartholinus (1677) we find engravings and descriptions of pipes, said to have been in use amongst the ancients, which were more probably invented in the fifteenth or sixteenth century A.D. There is, however, no doubt that Bartholinus was right in his supposition that the moveable pegs and rings were for the purpose of closing holes that the fingers were unable to cover. No transverse flutes are represented or described by either of these authors.

Amongst the numerous antique statues of so-called flute-players that I have examined, I have never seen one in which a flute with a lateral mouth-hole formed part of the original statue, the flute being, in every case, a "restoration." Transverse flutes in antique statuary there are indeed, but these, when original, have mouth-pieces projecting from the side, or from the end, somewhat similar to those of the transverse *flûte-à-bec*, which was once common, and some more recent flageolets made by Bainbridge of Holborn about sixty years since.

306. There can hardly be any doubt that the lost books of Aristoxenus of Tarentum, entitled *On Flutes and other Instruments*, and *On the Boring of Flutes*, alluded to flutes with reeds or some other kinds of mouth-pieces, and weighing the whole of the evidence on both sides, I am unable to arrive at any other conclusion than that the author of the article in the *Encyclopédie* is right, in so far as the flute with lateral mouth-hole is concerned, and that the few isolated instances, of more than doubtful authenticity, to the contrary are not worth serious consideration. The evidence of the antiquity of the class of instruments of which the whistle is the type, is too strong to be resisted, and although it is not with these that we have to deal, it is necessary to point out that it is probably owing to their having been confused with the real transverse flute, that the false ideas concerning the antiquity of the latter have arisen. As an instance of the loose manner in which these different instruments are confounded together, even in generally accurate works, the ensuing

account from Mendel and Reissmann's Dictionary (1880, Art. *Flöte*.) may be cited. "In a dolmen in Poitiers there was found a flute made of stag's horn. . . . This is a transverse flute, and the mouth-hole is perfectly made. The finger-holes, three in number, are in the upper part of the instrument and equidistant." This description is said to be taken from Fétis's *Histoire Générale de la Musique* (1869), but the original account refers to a totally different kind of instrument which is clearly figured and described, and which closely resembles the modern *ocarina*, being, in fact, a whistle.

Another instrument, described and figured by Fétis as a "*flûte*" from Otaheite, has in the engraving the appearance of a transverse flute, but seems, from the account of the manner in which it was sounded, to have been nothing of the kind. "This instrument," says the author, "was played nearly in the same manner as the transverse flute, except that the musician, instead of making use of his mouth, blew into the instrument through one of his nostrils, whilst he stopped up the other with his thumb." This flute must therefore have been also a whistle of some kind, for the impossibility of producing musical sound by blowing through the nostril across the lateral mouth-hole of a transverse flute, is manifest. I am informed that instruments blown through the nose are still common in some barbarous countries.

307. There being no reasonable basis for the assumption that the flute of our time is of really ancient origin, a recapitulation of the innumerable anecdotes concerning the *αὐλῆται*, the *tibicines* and the *fistulatores*, would, however interesting, be out of place in this book, but as an old professor of the flute, perhaps somewhat strongly impressed with the virtues of a certain system of teaching, I may be pardoned for inserting here an expression of Xenophon concerning the teaching of Socrates, which I translate as follows: "For what flute-player, or what harp-player, or what other teacher, having produced competent pupils, is blamed for their degeneracy, if they, after having gone to other masters, should become less skilful?"—*Xen. Mem. I. ii. 27.*

CHAPTER XI.

ON THE FLUTE-TUBE AND ITS VARIOUS DETAILS AND ACCESSORIES, INCLUDING AN ACCOUNT OF THE QUALITIES NECESSARY FOR IDEAL PERFECTION.

§308. INTRODUCTORY.—310. DIFFERENT SIZES OF FLUTES.—311. THE MATERIALS USED FOR THE TUBES OF FLUTES.—312. BOX-WOOD.—313. JAMAICA COCUS-WOOD.—314. EBONY.—315. CUBAN AND SOUTH AMERICAN COCUS.—316. OTHER WOODS.—317. IVORY.—318. METAL-LINED HEAD-JOINTS.—319. GLASS AND PORCELAIN.—320. METAL.—321. EBONITE.—322. THICKNESS OF THE TUBE.—323. THE JOINTS OF THE FLUTE.—325. CONTRIVANCES FOR ALTERING THE PITCH OF A FLUTE.—326. EXTRA MIDDLE JOINTS.—327. THE TUNING SLIDE.—328. THE CORK, OR STOPPER.—329. ITS MATERIAL AND CONSTRUCTION.—331. ITS POSITION.—333. THE MOUTH-HOLE.—338. THE BORE. ITS VARIOUS FORMS.—342. ITS DIMENSIONS.—343. THE FINGER-HOLES.—345. THEIR DIAMETER.—347. VEILED NOTES.—348. POSITIONS OF THE FINGER-HOLES.—357. VENT-HOLES.—360. THE *c'♯* HOLE.—363. THE LATEST IMPROVEMENT IN THE *c'♯* HOLE.—364. THE TENDENCY OF VENT-HOLES TO CAUSE UNDUE SHARPNESS.—365. THE SUPERNUMERARY *d''* AND *d''♯* HOLES.

308. **Introductory.** The ensuing account of the tube of the flute, with its numerous accessories, and of the requirements of ideal perfection, is partly intended to enable the reader to understand the history of the flute, which forms the subject of chapters XIII. to XV., and to appreciate the defective construction of the earlier flutes, as well as the various modifications which the tube and its perforations have undergone during the last three centuries and a half of the existence of the instrument.