

**THEOPHILUS** - [Monk, not the Emperor who also had connections with the organ]

Benedictine monk, ordained as a priest, also known as Roger of Helmarshausen. He lived in Germany or eastern France during the first half of the 11<sup>th</sup>c. Among a number of works he wrote a substantial treatise, *De Diversarum Artium Schedule*, in which he describes the production of objects for the church, such as painting, gilding, glass blowing, the casting of bells, and organ building. The section on the organ treats the manner of fabricating pipes, windchests, sliders, and the air-collector or [conflatorium](#). He advises the reader to consult a measurement treatise to determine the specifications for low, high, and very high pipes. The pipes are made of copper that is beaten very thin and fitted around a conical iron mandrel. The long edges are soldered together, but as there is no indication of a separate foot soldered to the body of the pipes, the shape was probably that of a regular cone. Pipe diameters are identical, suggesting a restricted pitch range. The voicing was achieved by enlarging the mouth for a fuller sound and narrowing it for a thinner sound.

Theophilus gives instructions for making windchests of both copper and wood. He provides for several ranks of pipes for each note, although there is no mechanism for separating individual ranks, as in the system described by Vitruvius (1<sup>st</sup>cBC). Wooden sliders with perforations corresponding to the number of ranks are fitted into channels in the chests; each slider handle is marked with the letter of its position in the scale. There is no key mechanism attached to the sliders, so they were presumably key-slides.

The next part of Theophilus's treatise concerns the air collector, a reservoir leading to the windchest that is fed by several blacksmith's bellows. This type of wind system is also depicted in the early 13<sup>th</sup>c Cividale del Friuli manuscript. *T* concludes with directions for placing the instrument in the wall of a monastery church. The bellows and organist are located in an archway cut into the wall, and only the windchest and pipes are visible to those in the nave of the church. It is covered with a thick curtain when not in use. A pulley system enables the curtain to be lifted by a rope when it is played.

The treatise of *T* is less of a construction manual than a record of techniques used in church design. The omission of an important practical detail like the non-return valve in the forge-bellows undermines the value of the document as a building model. Benedictine writings thus came to represent a shift away from the traditional copying of canonized texts to records of contemporary life based on empirical study. Yet their scrupulous accounts do not explain why organs were built in the first place.

The characteristics of the organs of *T* were: Sliders with one air-hole; pipe and bellows-making descriptions; key-slides (pulled into the "on" position); 1-<2 octave compass, probably diatonic or only limited chromatic notes; c11 notes is the average (iconography); pipes of equal diameter, adjustments to pipe mouths producing *grossam* (fat) and *graciliorem* (thin) effects.

Modern reconstruction of organs carefully built according to the treatise of Theophilus exist at Royaumont, Cistercian Abbey in France, at Ostheim v. d. Rhön, Germany ([www.orgelbaumuseum.de/ausstellung/die-geschichte-der-orgel/](http://www.orgelbaumuseum.de/ausstellung/die-geschichte-der-orgel/)) and a later development based on the 13<sup>th</sup> century [Rutland Psalter](#), for Jankees Braaksma's group, *Super Librum* in the Netherlands ([www.superlibrum.nl/](http://www.superlibrum.nl/))

