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## IDENTIFICATION OF THE PLANTS IN ARTWORKS: THE BRONZE BASE OF THE «FOUNTAIN OF THE PORCELLINO» OF FLORENCE

**Abstract** - The «Fountain of the Porcellino» today housed at the Bardini Museum in Florence has had two bases created in different eras. The original was made by Pietro Tacca in 1633 and was replaced, due to heavy wear, by a copy in 1857. The Tacca base was subject to analysis by the Museum of Natural History of the University of Florence for the purpose of identifying the numerous plants depicted on the patch where the animal rests.

To identify the plants, we used comparison with botanical iconography, fresh plant specimens and, finally, the 19<sup>th</sup> century copy where the position and depiction of a few plants correspond, with great detail in the particulars, to the original.

The difficulties in the work of identification were derived from the wear on the figure, in many cases very accentuated, from the representation of the plants in an early state and with basal rosettes without reproductive elements, and from the lack of unambiguous diagnostic figures. Of the 23 plants depicted, 8 could be directly identified; for 11 others we made a comparison with the 19<sup>th</sup> century copy, identifying 3 of them and attaining a hypothesis of species or genus for the remaining 8. The last 4 were absolutely unidentifiable and no hypothesis is possible.

**Key words** - Fountain of the Porcellino, Bardini Museum, Plants and animals in works of art, Pietro Tacca.

**Riassunto** - *Identificazione delle piante nelle opere d'arte: la base bronzea della «Fontana del Porcellino» di Firenze* - La «Fontana del Porcellino» detta anche del «Cinghiale» statua molto amata dai fiorentini, ha avuto due basamenti creati in epoche diverse e oggi conservati nel Museo Bardini di Firenze. Quello originale fu realizzato da Pietro Tacca nel 1633 e sostituito, a causa della forte usura, da una copia nel 1857. Il basamento originario è stato oggetto di indagine da parte del Museo di Storia Naturale dell'Università di Firenze, su commissione del Museo Bardini, al fine di identificare le numerose piante raffeggiate sul prato dove sosta l'animale. Per l'identificazione delle piante, avvenuta non sul basamento a causa del restauro in corso eseguito dall'Opificio delle Pietre Dure di Firenze, ma su fotografie scattate prima del restauro stesso, si è proceduto per confronto con iconografia botanica, con campioni vegetali freschi e, in qualche caso, con la copia ottocentesca dove alcune piante corrispondono per posizione e raffigurazione, con grande dettaglio nei particolari, all'originale.

Le difficoltà nel lavoro di identificazione sono derivate dall'usura delle figure, in molti casi molto accentuata, dalla rappresentazione delle piante a uno stadio giovanile, soprattutto di rosetta basale, dalla mancanza di elementi riproduttivi e di caratteri diagnostici univoci.

Delle 23 piante raffeggiate, se ne sono potute identificare direttamente 8, fra le quali 3 specie diverse appartenenti al genere *Plantago*, oltre a *Tussilago farfara* e *Verbena officinalis*. Risolutivo il successivo confronto con la copia ottocentesca per identificare *Verbascum sinuatum*, *Portulaca oleracea*, *Plantago media*. Per 11 piante con caratteri generici o per le quali non esiste piena sovrapposizione con la copia ottocentesca, si è potuto esprimere solo un'ipotesi a livello di specie o di genere. Per le ultime 4, assolutamente indecifrabili, non è stato possibile avanzare alcuna ipotesi.

**Parole chiave** - Fontana del Porcellino, Museo Bardini, piante e animali nelle opere d'arte, Pietro Tacca.

### INTRODUCTION

Partnerships between botanists or zoologists and art historians to identify natural elements in works of art are increasingly more frequent and, in recent years, there have been numerous works of this kind. Among the various examples, we mention a few in which scholars from the University of Florence participated, carried out on different typologies of artworks: the identification of the plants on Ghiberti's Porta del Paradiso at the Baptistery of Florence (Levi D'Ancona et al., 2000), in the frescoes of the Cappella della Cintola in the Duomo of Prato (Nepi, 2009), in the table of Filippo Lippi's Nativity (Nepi, 2010), in the Medicean wall hangings of the Quirinale in Rome (Nepi, Signorini, 2010), etc.

Difficulties in such research depend largely on the faithfulness of the representation, the expressive means and artistic technique adopted, the purposes of the representation (Caneva et al., 2005) and the historic period in which the artworks were made (Moggi, 1987). The work of identifying the natural elements, on the other hand, is facilitated by the presence of particular morphologies of plants and animals, by the realism with which they are depicted, and the use of color and three-dimensionality.

It is in this context that we report the case of the base of the «Fountain of the Porcellino» housed at the Bardini Museum of Florence which has commissioned the work of identifying the plants to the Museum of Natural History of the University of Florence.

The «Fountain of the Porcellino», better known as «of the Wild Boar, called the Porcellino» was carried out in bronze by Pietro Tacca, pupil of Giambologna, in 1633. The statue of the animal was copied from a Hellenistic marble of Medicean property, while for the base the sculptor used his imagination (Paolini, 2007) to create a small puddle of water surrounded by a field rich in floral and animal elements (Fig. 1), near which the «Porcellino» rested, enticed by the sound of the hunters' flute (Nesi, 2011). The merchants and people drew water at the fountain, generally approaching with hobnailed boots: the consumption to the base worsened to the point that in 1857 a copy was made

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Fig. 1 - Pietro Tacca's base (bronze, XVII sec.). (Photo A. Grigioni).

by Clemente Papi, on the design of the decorator Giuseppe Benelli, to substitute the original base of the fountain, which had become very deteriorated (Paolini, 2007) (Fig. 2).



Fig. 2 - The XIX century copy. (Photo A. Grigioni).

#### IDENTIFICATION OF THE PLANTS

In the 17<sup>th</sup> century base there are 23 plants, whose identification was accomplished using live specimens, photos and botanical drawings (Clauser, Nepi, 2011). Various difficulties were encountered owing to the lack of unambiguous diagnostic characteristics in the individual plants; to their representation in the stage of rosette which naturally presents great variability of expression; to the absence of reproductive characteristics needed for recognition; to the wear on the figures, in some cases very pronounced; and, finally, to the impossibility, caused by the restorations in progress, to work directly on the bronze base, using photos and their elaborations. Despite such limitations, 8 plants were identified: one *Plantago lanceolata* L. (Plantaginaceae), two *Plantago major* L., three *Plantago media* L., one *Tussilago farfara* L. (Asteraceae), one *Verbena officinalis* L. (Verbenaceae). For 11 others a comparison with the 19<sup>th</sup> century copy was used, where the representative detail is very accurate: in the case of full correspondence among the plants of the two bases, one *Verbascum sinuatum* L. (Scrophulariaceae), one *Portulaca oleracea* L. (Portulacaceae) and one *Plantago media* were identified. Where, instead, there was not perfect overlap of position or representation among the plants of the two bases, only some suppositions could be made (*Plantago media*, *Primula vulgaris* Huds., *Dipsacus fullonum* L., *Polycarpon tetraphyllum* (L.) L., *Inula conyza* DC., *Symphytum* sp., *Rumex* sp.). For the last 4 plants it was not possible to arrive to a hypothesis, not even of a genus, given the heavy wear to the represented plants.

Based on the results obtained, the peculiarity of the presence of three different species of the genus *Plantago* becomes evident. They are recognizable because of the differentiation in the morphologic vegetative characteristics (kind of leaf nerves, absence or presence of the petiole, leaf morphology). Considering the entirety of the identified and hypothetical plants, note that they are common varieties, spread out in marginal environments, but not typical of a particular habitat, not even of a moist zone like the presence of amphibians and the statue's purpose of beautifying a fountain might suggest.

We can only speculate on the selection Tacca made to represent some species instead of others. As already pointed out it's rather hard to identify plants only by their basal rosette without reproductive characters, but the plants of the base – e. g. the plantains or the purslane – are among the relatively few species to be well characterized in this regard.

We have also to consider that some of the represented species are part of the Tuscan tradition in phytotherapy and for this reason they are widely known even by not expert botanists. All this suggests that Tacca had his own naturalistic knowledge and a great skill of observation on the natural environment.

The experience made on the identification of plants on the Tacca's base encouraged the constitution of a working group in Florence University dedicated to this sector of applied sciences. In this context we decided to follow up this work with the identification of all the plants of the 19<sup>th</sup> century base and to widen the research to the animals, too, in collaboration with the colleagues of the Section of Zoology of Museum of Natural History (Fig. 3). Anyway we are aware that further analysis of the 19<sup>th</sup> century copy will not bring new elements to identify the plants on the original base: in fact, the two bases were compared only in a few cases already described, in which there is full correspondence between the elements.



Fig. 3 - Some of the animals and plants on the XIX base. (Photo A. Grigioni).

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