

Pier Antonio Micheli (1679-1737) The Founder of Scientific Mycology

D. W. Gover



While others had collected and illustrated fungi much earlier, such as Federico Cesi's illustrations of around 1623 – 1628, Pier Antonio Micheli is considered by many to be the founder of scientific mycology.

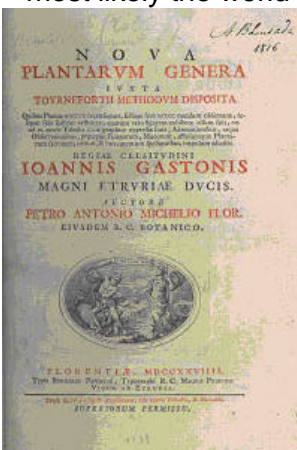
Born on 11th December 1679 into a poor family in Florence Italy, where his father Pier Francesco di Paolo Micheli, was a dyer, he was apprenticed to a bookseller in Florence at an early age and not able to afford a formal education was helped by the botanically knowledgeable Abbot of Valombroso who assisted his education. While working at the booksellers he was able to teach himself Latin and study botany. Considering his lack of a degree, his fortunate appointment to a relatively junior position as a botanist to Grand Duke Cosimo III de' Medici, Duke of Tuscany, in 1706, with the responsibility for the public gardens of Florence, gave him the opportunity to further his botanical interests and to teach at the University of Pisa.



He obtained the patronage of both the Grand Duke Cosimo III de' Medici and his successor Gian Gastone de' Medici and the support of these two men permitted him to devote himself completely to his studies. While initially he only held a modest position in the botanical garden, later he would become the director.

He conducted an extensive correspondence with both Italian and foreign botanists, meeting in 1699 William Sherard (1659 – 1728), the foremost English botanist of the day, a patron of other naturalists and who when he died, left money to endow the Chair of Botany at Oxford University and for the support and enduring continuance of the Oxford Botanic Garden. Micheli formed a long friendship with Sherard and established a continuing and fruitful correspondence.

He was influential in founding, in 1716, with a group of friends, the Società botanica Fiorentina, most likely the world's first botanical society that included many of the leading aristocrats.



His major work, *Nova plantarum genera juxta Tournefortii methodum disposita* (New Genera of Plants, Handled

According to the Method of Tournefort (Florence 1729) had a difficult genesis. In 1720 Micheli presented the manuscript to the Grand Duke, but Tilli, more senior to Micheli at the Garden in Pisa got the support to publish his manuscript.

Subsequently Micheli obtained sufficient funds from Gian Gastone de' Medici, the Grand Dukes successor, to enable the plates to be engraved. Finally, after begging the rest of the money from various sources, the completed work was published in 1729. *Nova plantarum genera* dealt with about 1900 species, 1400 of which were new,

with some 900 fungi and lichens, illustrated on 73 plates, including comments on "the planting, origin and growth of fungi". With this work, he recast the accepted fungal theories, establishing him as the first to carry out scientific studies of fungi.

With wide ranging botanical interests and unlike earlier botanists, Micheli was one of the first to specialise in certain groups of plants, such as, the umbellifers, gramineae, mosses, marine algae and unusually for that time, fungi. He was the first to observe, and describe, fungal spores as reproductive bodies, to describe asci, and to culture fungi from spores. His culturing of fungal spores, or as he wrote, "sowing" spores, and subsequently growing the parent fungus helped to overturn the then current theory of "spontaneous generation" of fungi.



While his other interests ranged across many fields such as, zoology, especially sea life, palaeontology and geology, it was his work in botany, including fungi, which at that time were considered to be a form of plant life, that drew high praise from William Sherard, who while himself a brilliant botanist, considered Micheli to be the leading botanist of the day. The Grand Duke utilised Micheli's other talents sending him in 1708, as part of a collecting trip for the Gardens, to Germany to learn and report on how they made tinplate.

On his last collecting trip in 1736 he contracted pleurisy, dying on 1st January 1737, in Florence. In 1737, Linnaeus named the plant genus *Michelia* (family Magnoliaceae) after him. The genus includes about 50 species of trees and shrubs, native to tropical and subtropical southeast Asia and southern China. The street Via Micheli, Florence, is named in his honour. Micheli left his collections to his disciple Giovanni Targioni Tozzetti. Interestingly, a copy of his book originally in the British Museum and subsequently transferred to the British Library, was purchased from Madame A. Targioni Tozzetti for £15 in 1863?

Micheli's book remained unfinished at the time of his death (in the sense that he continued to collect more material), and a considerable amount of the data that he had gathered was never incorporated into it. While Micheli dedicated genera to a number of his aristocratic patrons, it is worth noting that they did not provide money to publish the works that Micheli left. Perhaps the irony of his life is that after his death, Micheli, who was significantly handicapped for his entire career by a lack of a degree, was dressed in a doctoral gown for his funeral.

