

WILLIAM BOWLES, UNRECOGNISED IRISH-BORN SCIENTIST

By

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Readers will have noticed that I have taken to writing occasional columns on famous Irish-born scientists. We have a proud scientific heritage that is not widely appreciated and I am trying to do my little bit to correct this. Today I describe the life and work of William Bowles (1720-1780) who did very significant scientific work, largely in Spain, but who is virtually forgotten in his native Ireland.

I had never heard of William Bowles until, sparked by my recent column on Robert Boyle, I was contacted by a reader, George Reynolds. George, a winner of the Aer Lingus Young Scientist competition in 1968, told me about Bowles, to whose history he was initially introduced by Ms. Maureen Scannell (retd.) of the Botanic Gardens. Almost all of the details in this article are taken from a history of the life and work of William Bowles compiled by George Reynolds.

William Bowles was born near Cork in 1720 (some references state 1705). Little is known about his early life. He studied law in London and then went to Paris (1740) where he studied natural history, chemistry, metallurgy and astronomy. He subsequently travelled through France and Germany studying natural history and mineral and other productions.

In 1752, having become acquainted with Don Antonio de Ulloa (1716-1795), afterwards Admiral of the Spanish Fleet, Bowles was inducted to superintend the Spanish State mines, form a natural history collection and establish a chemical laboratory to study platinum and its alloys.

One of his early successes was to visit the Almaden [e has accent] mercury mines that had been damaged by fire, and the plans he proposed were successfully adopted for their resuscitation. Also, Bowles's research on platinum caused him to refute the ideas current at the time that platinum was merely an alloy of iron and gold.

Afterwards Bowles travelled extensively in Spain, observing the flora and fauna, and commenting on the inhabitants and their customs as well as collecting information on the mineral deposits of Spain. His society was much valued in the 'best' Spanish circles.

Bowles's principal work, 'An Introduction to the Natural History and Physical geography of Spain', was published in Spanish in Madrid in 1775. This book has considerable value, being the first work of its kind. Bowles had difficulty learning Spanish and enlisted the help of friends to translate important documents. Don J.N. de Azara (Spanish ambassador at Rome) helped him in preparing the first edition of his book. It was later translated into several languages.

In his work Bowles observed the geology, flora and fauna of Spain and collected mineral and biological specimens. He described the action of the sea on the coastline and made notes on springs and groundwater and the extinct Spanish volcanoes. Because of his familiarity with German geological thinking and with the geology of France and the Alps he appreciated the idea of geological uniformity and could put Spanish formations into context. Specific references to Ireland in the book include the assertion that the potato came to Ireland from Galicia (NW Spain), and a comment on the success of importing Irish Wolfhounds to Spain in keeping down the Spanish wolf population.

Ulluo convinced King Ferdinand VI in 1752 of the need to establish a Council of Natural History to consolidate the teaching of mineralogy, botany and zoology. The Museum of Natural History was founded in Madrid in 1753 with Ulluo as Director and Bowles as principal scientist. Bowles introduced the heather *Daboecia Cantabrica* [italics], previously found in NW Spain and Ireland, to England. Also a genus of plant from Peru related to the carrot, 'Bowlesia', was named after him.

Bowles married a German woman Anna Rustein and she accompanied him frequently on his travels around Spain as they were very devoted to each other. They moved house so many times that, to avoid putting their furniture in storage, they sold it each time a long trip was planned. Anna was pensioned by the King of Spain after her husband's death in 1780.

Although Bowles had an initial bad reaction to Spain, declaring that ‘All Spain was stupid, lethargic, poor, dirty, jealous and melancholy’, he quickly changed his mind and, as already described, became well accepted in Spanish society. He observed and commented on the similarity between Spanish and Irish people. In particular he observed the peasants of Vizcaya in the Basque region noting their love of fairs and dancing, resembling Irish celebrations of feast-days of Patron Saints. He described the tradition of ‘fist-fights’ at these fairs in both countries and noted that serious injury was seldom sustained. He compared the ‘Sheebeens’ of Ireland with the ‘Chacoli’ of Vizcaya, both venues for drinking illicit liquor. He decided that the women of Ireland and of Vizcaya greatly resembled each other and asserted that ‘the Irish have always professed a great love for the Spanish nation’.

William Bowles died on August 25, 1780 in Madrid and is buried in the Church of San Martin. He made a remarkable contribution to science in general and to Spanish science in particular. Not only was he a fine scientist, but he was generally a fine fellow, described by his contemporaries as tall and fine-looking, generous, honourable, active, ingenious and well-informed.

As far as is known, there is no English translation of Bowles’s book in existence today. It would be a most worthy project to commission a new English translation of this book. This would serve both to engender some appreciation of William Bowles in the land of his birth and also to enhance relations between Ireland and Spain.

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