

## **BIRD NOTES --- Part 1**

**Francis Willughby**

***The First True Ornithologist***

Born: November 22, 1635 at Middleton

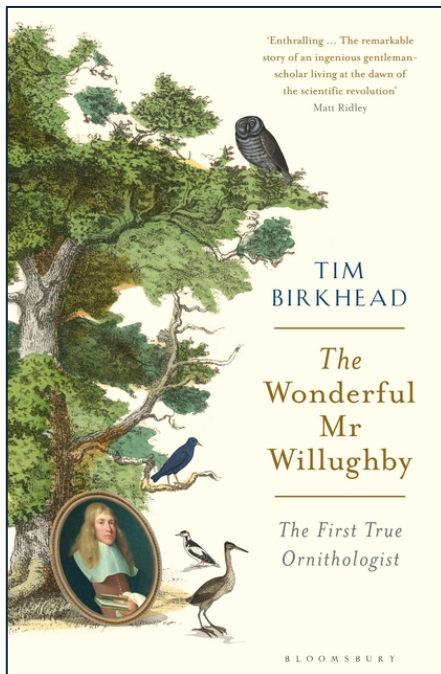
Died: July 3, 1672 at Middleton

***“He digested the whole history of nature with that spirit and judgement that is always appeared new; with that care and diligence that he was always constant to himself; and with that integrity that he has ever been esteemed a faithful interpreter of nature.”***

Memorial to Francis Willughby in Middleton

***“God has given him quick apprehension, piercing wit, and sound judgement, which by his great industry he did improve and advance.”***

John Ray



In his new book, **The Wonderful Life of Mr. Willughby**, Tim Birkhead, a professor at the University of Sheffield, presents his thesis that Francis Willughby should be considered as the world's first true ornithologist.

Francis Willughby was born in 1635 into a family of landed gentry during an era of turbulent times for England but exciting times for science. Francis entered Trinity College, Cambridge in 1652 at a time when education was changing from the “old philosophy”, which assumed that God dictated man's place in nature, to a “new philosophy” based on observation and experimentation. The “old philosophy” was based on the writings of Aristotle and Pliny the Elder which taught that there was nothing new to be discovered. This view of the universe was challenged by Francis Bacon in the mid-1500's. With the discovery of a new land by Columbus in 1492, along with its

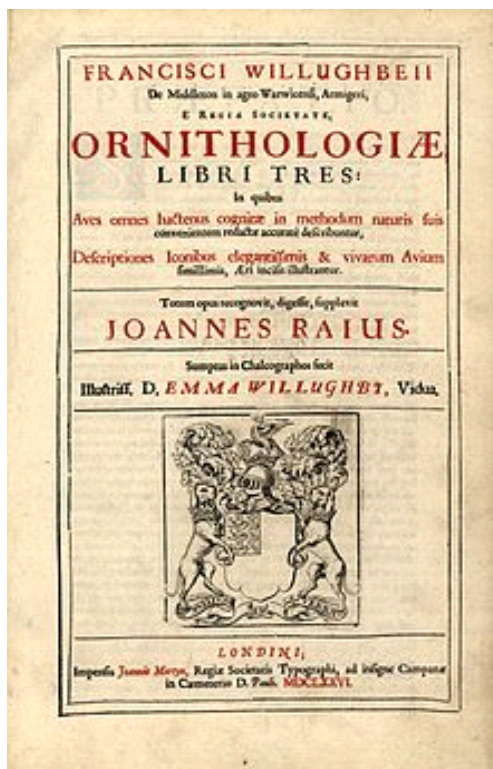
treasure trove of unknown plants and animals, Bacon realized that there was much to be discovered and explored. The scientific revolution had begun, based on objective knowledge derived from personal observation and experimentation. The scientific revolution gained traction with the 1543 publication of Copernicus's *Revolution of the Heavenly Spheres* and with Newton's 1687 work on mathematical physics, *Principia*. Willughby embraced the “new philosophy”, graduating in 1656 and ranked above every student at the university. His penchant for hard work was noticed by one of his tutors who wrote:

*“What a glutton for books and culture  
You would be: for there I remember well  
That for you, panting heavily for education,  
Hastening to acquire skills with too swift a foot,  
There was a need for reins, not for spurs.*

Francis stayed on at Trinity and received his Master of Arts in 1659. During this time, he developed close relationships with teachers and students at Trinity, the most important being with John Ray, his tutor. They both had a love for the natural world: Francis had his work with birds but also with fish and insects, and Ray had knowledge and expertise in botany. I will discuss only their work with birds in this and the following article.



A major impediment to scientists of the 17<sup>th</sup> century was that they did not speak the same language of the new science. For Willughby and Ray, this meant developing an agreed upon way of evaluating species so scientists could talk with and understand each other. An important group formed in May of 1663 for the “promoting of experimental philosophy.” Willughby was elected as an “Original Fellow” of the “Royal Society of London for Improving Natural Knowledge.” He was 27 years old at the time of his election. This association was to play an important role in helping him (and Ray) develop his skills as a scientist.



Beginning in the 1660's, Willughby and Ray traveled together on a number of journeys through the English countryside, studying and collecting birds, especially seabirds. The most important result of these trips was the planning of a scientific journey to study the natural history of continental Europe and Spain. They planned to research what already been recorded in the ornithological literature, and to collect and examine as many different birds as they could. Preparation for such an extensive expedition in the 17<sup>th</sup> century to an area to which one had never traveled was quite a bit different than in the 21<sup>st</sup> century.

Next month's article will discuss the results of Willughby and Ray's long journey in Europe and why John Ray had to author the results of Francis Willughby's life work.

Email Questions or Suggestions to [eapyeritz@gmail.com](mailto:eapyeritz@gmail.com).

*Title Page of Francis Willughby's Ornithologiae Libri Tres published In 1676. Authored by John Ray, Published in English Ornithology in 1678, Authored by John Ray*