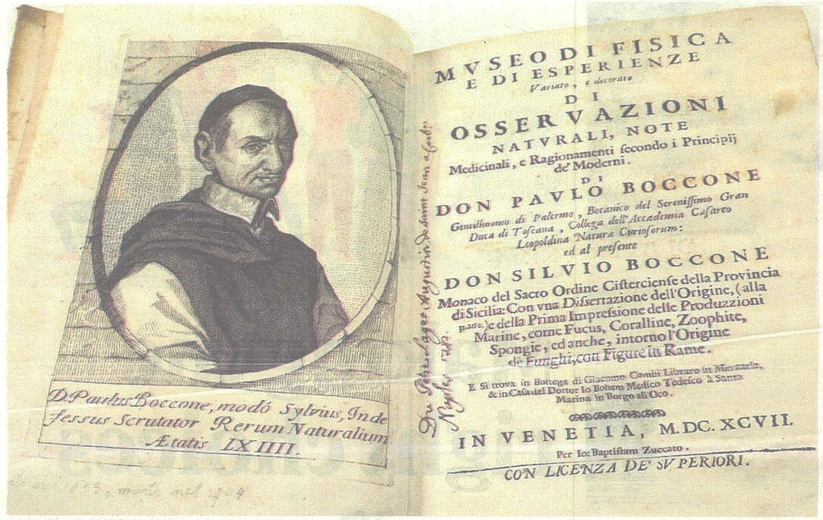
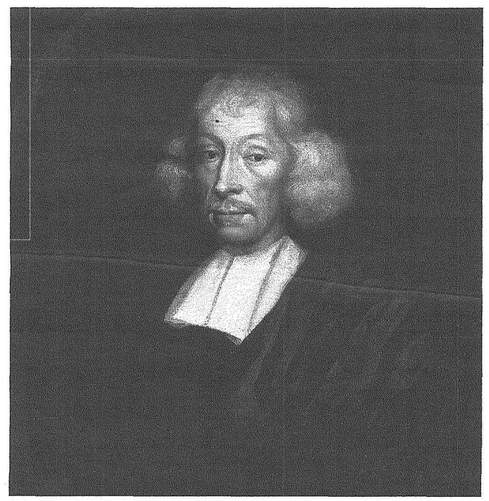


Sicilian naturalist Paolo Boccone

Swedish naturalist Petrus Forsskål



John Ray (1627-1705), the 'father of English natural history' (from a portrait in the National Portrait Gallery, London)

Three early naturalists who visited Malta

DAVID DANDRIA

During the 17th century, many scholars undertook long journeys throughout Europe and even ventured further south. These travellers had a variety of motives, and they included explorers, pilgrims, craftsmen, diplomats and the scions of noble families with little else to do but further their education by undertaking the Grand Tour.

Among these personalities one counts the naturalists – dilettantes who were beginning to give their studies a more scientific basis. Malta's geographical position, together with the fame it had achieved after the Great Siege, made it a favourite stopover for these travellers when they ventured further south after touring Italy and Sicily.

One of the first naturalists to visit Malta was one who was to become known in later years as the 'father of English natural history'. This was John Ray, who was born in Essex in November 1627. After graduating from Trinity College, Cambridge, he stayed on at the University as a lecturer in Greek, mathematics and the humanities; in the meantime, he developed a passion for natural history.

In early 1663, Ray decided to undertake the Grand Tour of Europe accompanied by three of his ex-students – Francis Willughby, Philip Skippon and Nathaniel Bacon. The foursome set off from Dover on a journey that was to take them through Holland, Germany, Italy, Sicily and Malta. Willughby left them in Padua and returned to England, while the other three proceeded southward towards Italy and eventually Malta. They left Messina and crossed over to Malta, reaching the island on May 13, 1664.

As was the custom among such travellers, Ray kept a journal detailing his experiences during the trip; this was later published under the title of *Travels Through the Low Countries, Germany, Italy and France – with Curious Observations Natural, Topographical, Moral, Physiological, etc.* It includes a long section about Malta.

There is some doubt as to whether Ray and his companions stayed in Malta for 12 or 13 days as their date of departure is uncertain. In his journal, Ray gives a detailed description of Malta; he was of the opinion that geographically Malta is more European than African, preferring to follow "the more accurate observations of Johannes Franciscus Abela, a learned man and native of this island, in his *Malta Illustrata*".

He writes at length on the fossils found in Malta and concluded that the island must have been completely submerged, citing as evidence "the multitude of seashells of all sorts, sharks' teeth, *vertèbres* of thornbacks and other fish bones petrified all over the island". He did not agree with the theory that was then popular that these fossils were "formed by some plastic power in the stone quarries".

Ray also wrote about the island's agriculture, stating that the cereal crops he saw were thin on the ground and did not support the ancient acclaim of its fertility. Apart from the cereals, he lists the main crops grown in those times: cumin seed, aniseed, cotton and indigo plants.

He also refers to "a sort of excrescence or moss" that grew on rocks in the northern parts of Malta, called by the people *vercella*. This was, in fact, a lichen that was collected and used to produce a red dye.

Towards the end of his stay, Ray ventured to Mdina and Rabat, where he describes St Paul's Grotto, expressing his disbelief regarding the legends associated with the cave and with the miraculous properties of its *Terra Silgillata*, dismissing them and other legends about St Paul as no more than "monkish fancy". He does, however, affirm his belief that Malta was the site of the apostle's shipwreck, rather than "that other Melita in the Adriatick [*sic*] sea on the coast of Dalmatia".

> "Forsskål's *Testacea Fossilia-Melitensis* is thought to be the first scientific list of Maltese fossils"

Another naturalist who visited Malta in the 17th century came from nearby Sicily. He was Paolo Boccone, the celebrated botanist from Palermo who travelled all over Europe studying and recording the flora in many countries.

Although he mentions Malta several times in his publications, little is known about the actual dates of his visit or visits. They must have been prior to 1669, which was the year of his wife's death; according to one biography, his marriage had restricted his botanising to Sicily and Malta and after his wife's death, he started travelling all over Europe.

Boccone authored three important works in which he mentions Malta. In *Museo di Fisica e di Esperienze Variato e Decorato di Osservazioni Naturali*, published in 1697, he describes a number of his experiences on the island. Like Ray, he refers to the *Terra Sigillata* from St Paul's Grotto; he is not so sceptical, however, and lists some of its supposed medicinal properties.

He devotes a whole section, entitled *Intorno al Fungus Typhoides coccineus tuberosus Melitensis*, to the Malta fungus found on the "*Pietra del Generale che è un isoletta vicina al Gozo*". He lauds its medicinal properties and exhorts Italian physicians to make use of it.

In another section, dedicated to Ray's travelling companion, Thomas Willoughby, he describes a rather mysterious glass vessel, unearthed in 1680 near Mdina, which contained a balsamic liquor with unusual properties. He also writes at length about the fossils found in Malta.

In another publication, *Museo di Piante Rare della Sicilia, Malta, Corsica, Italia, Piemonte e Germania*, also published in 1697, Boccone describes a cure he personally effected on a nun of the Santa Caterina Convent in Valletta, 31-year-old Suor Rosana Seichel. The poor nun had been afflicted for two years with a severe cough and other symptoms which were extremely debilitating, so much so that she could not even lie down in bed: "*non poteva giacere a letto*".

Boccone prescribed a mixture based on a plant he refers to as "*Centaurea minore*" to be taken every night for 40 days. The nun soon started to recover and Boccone recounts that her condition improved to such an extent that after 27 days she could walk painlessly and sing in the choir with the other nuns.

From a Maltese flora point of view, Boccone's most important publication was *Icones et Descriptiones Rariorum Plantarum Siciliae Melitae, Galliae & Italie*, a lavishly-illustrated Latin tome published in 1674, in which he describes and depicts hundreds of plants, among them a number found in Malta.

Of course, the Malta fungus is one of them, and here we find the first known illustration of this celebrated plant, which, of course, is not a fungus at all but a flowering plant. He refers to the local appellation of the plant as "*Heritz tal General*" (Gherq tal-General). Boccone also mentions the renowned Maltese naturalist Gianfrancesco Bonamico, referring to him as "*Dominus Bonamicus Medicus eruditus*".

During the 18th century, Malta was host for a few days to the prominent Swedish naturalist Pehr Forsskål, also widely known as Petrus Forsskål (1732-1763). Recognised as a young scientific genius, Forsskål was invited by the King of Denmark to join a scientific expedition he was organising to the Mediterranean and Middle East.

He was to join five other scientists – in his paper 'The Arabian Voyage 1761-67 and Malta: Forsskål and his Contribution to the Study of Local Natural History', George Zammit Maempel described the group as follows: "Not only were they an ill-assorted band (two Danes, two Germans, two Swedes), but they jealously disliked and distrusted each other".

The expedition set off on January 10, 1761, from Copenhagen on board the Royal Danish Navy ship *Grönland* on what was to be a long and eventful voyage to the Mediterranean. They arrived in Malta more than five months later, on June 14, 1761, and stayed for a week.

During this short time, Forsskål roamed all over Malta, visiting many of the important attractions the island had to offer, including Buskett, St Paul's Grotto, San Anton Garden and Mdina. Together with the other members of the expedition, he also carried out a great deal of scientific research.

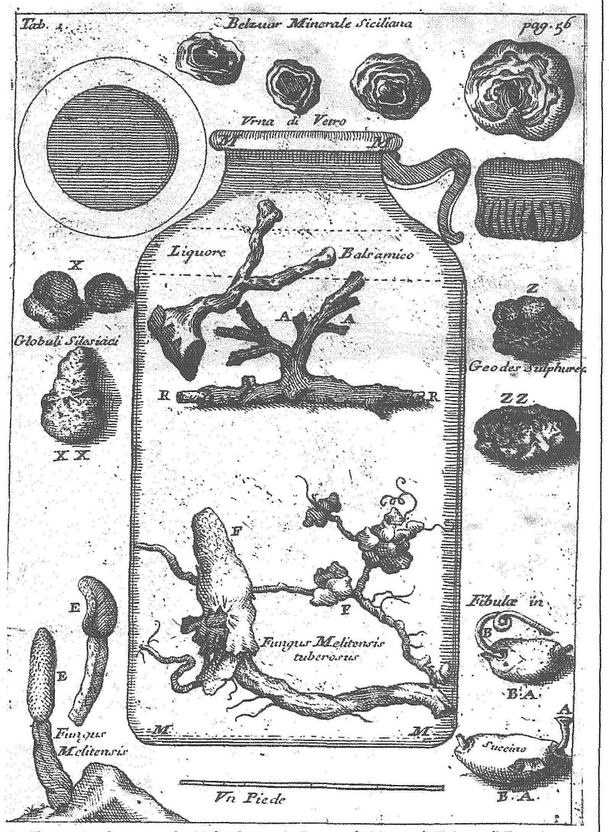
Forsskål was especially interested in the island's rich fossil deposits and compiled a list of 14 invertebrate fossils (11 molluscs and three echinoids). This list, entitled *Testacea Fossilia-Melitensis*, is thought to be the first scientific list of Maltese fossils. His botanical work, mainly carried out in the Salini salt marsh, resulted in a list of 87 species.

He also met an unidentified local learned doctor-naturalist who supplied him with a list of local fish species, which was published posthumously in *Descriptiones Animalium*; the doctor is now thought to have been Giorgio Giovan Battista Locano, a prominent physician and naturalist from Senglea.

The *Grönland* left Malta on June 20, 1761, for the Middle East, where they were to remain for the next five years. During this time, all but one of the scientific members, including Petrus Forsskål, perished.

Forsskål died from the plague in Yemen and his remains were buried in an unmarked grave in the village of Jarim. His memory lives on in his three major scientific publications: the *Flora Aegypttaco-Arabica*, the *Descriptiones Animalium, Amphibiorum, Piscium, Insectorum, Vermium* and the *Icones Rerum Naturalium*, the latter containing several illustrations of plants and animals new to science.

All three works were edited by the sole survivor of the expedition, Carsten Niebuhr, and published posthumously in Copenhagen.



An illustration featuring the Malta fungus in Boccone's *Museo di Fisica e di Esperienze.*

Centaurea melitensis as depicted in Boccone's *Icones et Descriptiones.*