

Sibthorp, Bauer and the Flora Graeca

by Stephen Harris

In Britain, the late-eighteenth century was an exciting time to be interested in plants. Fortunes had been made exploiting plants, the great and the good were enthusiastic botanical patrons, new regions of the globe were being explored and their botanical treasures returned to Britain's shores. Furthermore, new scientific methods were being used to investigate the botanical world and Carl Linnaeus' classification and naming systems were being widely adopted. In Oxford, John Sibthorp (1758-1796), Third Sherardian Professor of Botany, extolled Linnaeus' virtues in his undergraduate lectures: 'the most interesting Period of the Progress of Botany, when the bold but systematic Genius of Linnaeus forged as it were a Chain, which encompassed the whole of Nature'. However, lecturing was a minor part of John Sibthorp's short career as an Oxford Professor, as he was also responsible for the Botanic Garden and the Herbarium.

John Sibthorp was the only son of Humphrey Sibthorp, Second Sherardian Professor, by his second marriage. John

Sibthorp was educated as a physician in Edinburgh and came under the intellectual influence of the first teacher of Linnaeus' classification in Britain, John Hope. Sibthorp was to become very wealthy with the premature death of his mother and through the actions of his father to convince the University that this son should benefit from a ten-year Radcliffe Travelling scholarship (worth £300 per year). John promptly set off to some of the most prominent botanical institutions in Europe and returned to Oxford in 1783, when he convinced his father to resign the Sherardian Chair in his favour. John became Professor in 1784 and departed for another protracted European tour; he returned to Britain in late 1787. It was during this tour that he conceived the idea of the *Flora Graeca* and did the majority of the associated fieldwork.

John Sibthorp, concerned with his botanical reputation and legacy, decided to explore the relatively unknown western fringe of the Ottoman Empire. The *Flora Graeca* was to contain the botanical results of this exploration. He would be aided by the talents of the phenomenal botanical artist, Ferdinand Bauer (1760-1826), who was engaged for £80 per year (later rising to £100), and his travelling companion John Hawkins (1761-1841). Sibthorp and Bauer set off from Vienna in March 1786, travelled through Italy and passed through the Straits of Messina to collect plants in Crete. During his Cretan trip gems such as *Teucrium alpestre* and *Staehlina arborea* were collected. From Crete, Sibthorp and Bauer travelled to the Turkish coast and then overland to Constantinople where they overwintered. Here they met Hawkins and, in early-1787, caught the Mediterranean spring as they travelled to Cyprus, where they made

Left: Fig. 2. *Colchicum bivonae*. Sibthorp collected this eastern Mediterranean species as *C. latifolium*. The genus has medicinal properties, including as a painkiller, which have been recognized for thousands of years.



Fig. 1. *Staehlina arborea*. This is a distinctive species of the limestone gorges of Crete.

the first botanical collections known to western science and found the highly restricted Cypriot endemic sage, *Salvia veneris*. From Cyprus they meandered across the Aegean and arrived in Athens in June 1787. Excursions through Greece followed until September 1787, when Sibthorp and Bauer returned to Britain and Oxford. Throughout his journey Sibthorp had collected vast quantities of herbarium material, seeds and animal specimens, whilst Bauer had sketched hundreds of plants and labelled them with numbers that referred to a specific colour code. In Oxford, Bauer, despite his strained relationship with Sibthorp, used his sketches, together with the herbarium material and, perhaps, living material from the Botanic Garden, to produce 966 magnificent, folio, life-sized botanical water colours; on average, Bauer produced one watercolour every one and one quarter days. These water colours would give the *Flora Graeca* its reputation for magnificence and contribute to its extraordinary cost.

Sibthorp returned to the Ottoman Empire for a shorter, more traumatic fieldtrip, without Bauer, in 1794. Sibthorp arrived back in Britain, 'more dead than alive', in late 1795 and died in Bath in February 1796; he never returned to Oxford. In his will, Sibthorp provided the vision, incentives and financial resources



to complete his *Flora Graeca* project.

Through the perseverance of John Hawkins and Thomas Platt, Sibthorp's friends and executors, the *Flora Graeca* was eventually completed. James Smith, founder of the Linnean Society, was the first botanist to be employed and was faced with unmounted and unlabelled herbarium specimens, Sibthorp's notes written in an 'execrable hand' and Bauer's largely unlabelled sketches and watercolours; Smith was paid £75 per year for his work. Having brought order to this chaos, Smith became engaged on the laborious task of ensuring that Bauer's watercolours were reproduced to the highest possible standard. The renowned botanical engravers James Sowerby were employed to produce the coloured engravings. The first part of Volume One of the *Flora Graeca*

was published in 1806. When Smith died in 1828, his place was briefly taken by Robert Brown, before John Lindley completed the project in 1840, when the final part of the Volume Ten was published. The total project had cost £15,572 6s 10d, and the income had been £15,581 12s. After 54 years the project was complete, the balance, £9 5s 2d, was transferred to the University, and the income from Sibthorp's estate used to establish the Sibthorpien Chair in Rural Economy (now Plant Sciences). Each of the 25 subscribers had paid £254 for their copy of the *Flora Graeca*.

Sibthorp's legacy was the discovery of hundreds of plants new to science and the publication of one of the most costly, rare and magnificent botanical books ever written. Some of the species that Sibthorp introduced to Oxford are still known in

British gardens, e.g., *Crocus flavus*, but the fate of the majority of the seeds and living material he returned to Britain is unknown, as the records have been lost. However, the Botanic Garden may contain a living remnant of Sibthorp's botanical efforts in the shape of the iconic black pine tree planted in 1799. Today, Sibthorp's herbarium specimens are housed in Oxford University Herbaria, whilst his manuscripts are in the Department of Plant Sciences Library, together with Bauer's original water colours and sketches.

Stephen Harris is Druce Curator of the Oxford University Herbaria. Stephen has recently published a book about Flora Graeca entitled The Magnificent Flora Graeca: How the Mediterranean Came to the English Garden ISBN 978-1851243068



High Science

by Sarah Lloyd

In November the Botanic Garden education team had the opportunity to work with Oxford based members of the Global Canopy Programme (GCP). The GCP is a group of governmental and non-governmental organisations linking major studies of forest canopies worldwide into a collaborative programme of research, education, and conservation.

Working together, a secondary school programme of activities was devised that would allow students to experience environmental education in a unique way using the Harcourt Arboretum. The aim of the programme was to show how a tree is a hub for life in forests and demonstrate how exciting studying environmental science can be.

Students spent part of the day exploring different parts of the Arboretum, looking at different strategies for

management. They began by looking at the pristine "Trees of the World" area, and compared this with the mixed coppice and the mature oak and lime woodland.

The students carried out surveys, listed species and measured diversity in each area. Students saw how diversity was affected by the activity of people in both a positive and negative way. It became clear that diversity doesn't appear overnight and it is the mature areas that have the most complex ecology.

Students were surprised to discover that the variety of life on the ground, amongst the trees of the mature woodland, was not particularly exciting, with surveys completed in just a few minutes. The conclusion was that despite our best efforts, diversity of the ground cover plants in the mature woodland of the Arboretum is low.

They then tried to figure out why. Surely this conclusion must be wrong, as their conclusions didn't agree with their preconceived ideas about biodiversity in woodland. They first questioned their own capabilities. Were they using the equipment correctly? Had they been working carefully enough?

They then questioned the limitations of the approach. Were the methods they had been using right for the area? Were they able to study all the living things there or were there parts of the ecosystem they couldn't get to?

At this point students started to look at the ecosystem as a whole entity. Where is the most productive part of the woodland? Where does life thrive? If they were ever going to understand woodland and forests they would need to study life high in the canopy.

Students then had an opportunity to do just that, supported by climbers from the Global Canopy Programme. Students listened well, tried hard and overcame the physical challenge of climbing one of the largest and most imposing trees at the Arboretum, the cedar of Lebanon. They had a view of the Arboretum that few get a chance to enjoy. They understood that if they really wanted to study life and its diversity in woodland or forest this was the place they needed to be, high in the canopy – could they be persuaded to come down?

Sarah Lloyd is Secondary School Education Officer at the University of Oxford Botanic Garden and Harcourt Arboretum
