Two women botanical artists and their most famous works

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Berthe Hoola van Nooten left her home in Belgium to travel to Jakarta (then known as Batavia), the capital of Java, with her husband, who subsequently died there, leaving her with debts to pay and a family to support. She decided to use the skill she must have acquired as a young girl to record the vegetation of Java and to market her paintings as chromolithographs. Her book, *Fleurs, fruits et feuillages choisis de la flore et de la pomone de l'île de Java, peints d'après nature*, was published in Brussels in 1863-4, and was lithographed by G. Severeys. The Reading University Library copy is the third edition and is missing one plate (*Citrus sarcodactylis*).

*Detail of Jambosa domestica from ‘Fleurs, fruits et feuillages …’*
Nooten’s story and endeavour cannot help but present parallels with Maria Sibylla Merian, one of the greatest painters of botanical illustration, who almost a couple of centuries earlier also left her home at the age of 52 and set sail for Surinam, a Dutch colony in South America, taking one of her daughters, Dorothea, with her. She stayed there for two years studying flowers and insects, and making several hundreds of drawings on vellum, later engraved and hand-coloured for her *Metamorphosis insectorum Surinamensium*, first published in Amsterdam, the artist’s home city, in 1705.

The text was printed in Latin and Dutch, and the price ranged from fifteen to eighteen florins, with the hand-coloured copy being the most expensive, costing thirty florins. The Reading University Library copy was produced two years after her death, hence the plates are not coloured. For this edition twelve further plates, with accompanying text, were added; the first ten by her other daughter Johanna after making her own voyage to Surinam, and using materials left at Maria’s death, and the last two by the great collector Albert Seba (1665-1736). The image shown left is a detail from the frontispiece, and shows Merian studying specimens presented to her by one of six putti. In the background, a spacious arch opens on to the tropical landscape of Surinam, and in the foreground a copy of her book lies open.

Before 1800, only a handful of women were working as artists, often being tutored by their husbands and other relatives. Merian, for example, came from a family of artists and engravers. Her interest in botany was stimulated by the education she received at home, and her father, Matthaeus, the elder (1593-1650) was also a skilled engraver (Reading University Library holds examples of his work). After his death, she learnt the art of flower painting from her stepfather, Jacob Marrell (1614-1681), a Dutch flower painter and teacher. She became a proficient painter, engraver and embroiderer, with an unmistakable artistic style, skill and dedication. Her main interest was entomology, and as a child she was fascinated by caterpillars and their life cycle.
Metamorphosis insectorum Surinamensium is one of the most important and magnificent works of natural history of its era, and the first scientific work to be devoted to the region. Each insect was carefully examined, often with the aid of a microscope, and then portrayed in all the stages of its development, together with a branch of the plant on which it habitually fed. Every picture is a drama, verging on the macabre, as Merian often depicted the insect’s natural predator as well - a giant water bug devouring a frog beneath a towering water hyacinth [shown above], monstrous lantern flies, and a cicada, hovering round a flowering double-blossomed pomegranate tree, or a garden tree-boa watching its prey [both plates shown below].

Berthe Hoola van Nooten, almost two centuries later, lived during the great age of Victorian floral art when botany became popular, and flower painting and drawing were thought to be appropriate pastimes for young ladies of fashion. Flowers became an important part of Victorian life; drawing rooms, walls and fireplaces were adorned with flowers and plants. Teachers of flower painting and published manuals began to appear, along with many accomplished women flower painters.
Artists often worked in collaboration with botanists who now wanted botanical illustration to be as accurate as possible. This passion grew to become an obsession, particularly in England, with a taste for exotic flora brought back from expeditions, and plants were grown for their beauty rather than their culinary and medicinal qualities.

Different media and techniques utilized by artists over the centuries contributed to the genre of botanical painting. The woodcut was used in the sixteenth century by authors of the first botanical books; by the seventeenth century, the copper engraving technique, used by Merian, revolutionised the art of printing, while hand-tinting and body colour enhanced the beauty and realism of illustrations. The custom of hand colouring in natural history texts became widespread in the sixteenth century, trained artists were often employed to colour plates, the task often falling to women; in fact Merian asked that only she and her daughters be allowed to colour the plates in her work.
The nineteenth century was the great age of the lithograph. The new technique of chromolithography enabled a large number of coloured illustrations to be done at a moderate cost and not by hand. As the writer Handasyde Buchanan explains in *An Oak Spring flora* by Lucia Tongiorgi, “Chromolithography is colour printing using lithographic methods, where a printing stone was used for each colour … the plates could be printed many times, with blocks of colour overlapping and overprinting to create the range of colours. As many lithographic stones were needed as there were colours to be applied”.

This great leap in printing technology resulted in a huge increase in the number of illustrated scientific works. The number of well-illustrated botanical books published was enormous; however, towards the end of the nineteenth century, quality deteriorated rapidly, although some lithographers on the continent seemed to have perfected the technique. Nooten’s spectacular plants of Java with their vivid colours are ideally suited to chromolithography, and it is the great skill of the lithographer, P. Depannemacker, a Belgian active in Ghent, that these plants are brought to life. He contributed to many periodicals and publications at a time when Belgium was a centre for botanical publishing.
The forty plates of Berthe Hoola van Nooten’s work are accompanied by text in French and English, and give not only the botanical description, but also information on the plant’s culinary, medical, religious and other uses, particularly how the natives of Java used the plants. This information must have been gleaned from the people she came into contact with, or just by observation.

The plates include indigenous, naturalised and introduced plants, shrubs and trees, with their decorative flowers, and sixteen plates of plants with edible fruits: pomelo, rambutan, mangosteen, custard-apple, bread-fruit, mango, bananas, star-fruit and papaya [shown below], amongst others.
Of the *Garcinia mangostana*, or mangosteen [*shown above*], Nooten writes that “This delicious fruit, the most renowned of tropical fruit, is the produce of a tree belonging to the order of the *Clusiaceae*, the species of which are all natives of tropical regions, of South-America, the isle of Madagascar and Africa … Excellent vinegar is made of this fruit, and its rind is used in decoction against various diseases; also as a dentrifice. The natives and the Chinese mix it with their dyes to render them durable. Several species of this order yield balsamic and resinous substances”.
Joel Roberts Poinsett (1779-1851) was the first American ambassador to Mexico in 1825. He took cuttings from a beautiful shrub he found growing by the side of the road in southern Mexico. As the plant became more popular it was given the common name Poinsettia in honour of this discovery.

Nooten describes the *Poinsettia Pulcherrima* [shown above] as a “beautiful and ornamental plant, native of Mexico, [it] is found in all the gardens of Java [and] at once attracts the eye by its glorious velvety crimson colour”.

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Nooten wrote a wonderful and evocative description of the *Butea frondosa* [shown above]: “This tree of medium height is one of the most beautiful ornaments of the Isle of Java and of the neighbouring islands. The flowers of fiery red are softened by the delicate shades of the buds and by the sombre hue of the bracts. One can easily imagine the striking effect of this tree in solitary and barren places where it is seen from a distance of several miles. Yet, so slightly do these flowers hold together, that they fall off at the least touch and such is the brightness of their brilliant colouring that in strewing the ground they seem to deck the grass with coals of fire”.
The Salak palm [shown above] is native to Indonesia, and its edible spherical fruit is covered by a prickly, lizard-like epidermis. It belongs to the order of Palmaceae, which, as Nooten remarks, was regarded by the renowned English botanist John Lindley as "the most interesting of the vegetable kingdom; as well as on account of the majestic aspect of their towering stems, crowned with foliage still more gigantic, as from the character of their grandeur which they impress upon the landscape of the countries they inhabit; their immense value to mankind as affording nourishment, clothing and numerous objects of economical importance, and the prodigious development of their reproductive organs."

Berthe Hoola van Nooten describes her tragic circumstances in the introduction to her book, but also mentions how the project brought her “a real and solid enjoyment” and that she was caught under nature’s “soft and balmy influences”. There does not appear to be any further information on her life. Maria Sibylla Merian also suffered hardship in Surinam, writing on her return to Amsterdam, after contracting malarial fever, that “In that country there reigns a torrid heat and every task becomes an enormous effort; I myself risked paying with my very life”. 
Botany itself is dominated by the great Swedish taxonomist, Carl Linnaeus (1707-1778), who in his publication *Systema naturae* (1735) devised a system of classification that encompassed all living things. His system, based on sexual parts of flowers, allowed many plants to be put into order. This classification, which has now been superseded, was controversial in its day and resulted in unnatural groupings. Linnaeus provided the inspiration for many flower books, and this is reflected in their titles and prefaces. He appears to have been acquainted with Merian’s work and cited her name in his *Species plantarum* (1753), where he first used his binomial system of nomenclature extensively: assigning living things a generic, then a specific name. Nooten, as her descriptions show, had a knowledge of botany and also of Linnaeus; her pictures depict not only the flowers with their Latin names, but also include smaller drawings of the reproductive parts, showing that she was aware that her audience was also a scientific one.
As the writer Wilfrid Blunt observes in *The art of botanical illustration*: “The botanical artist can serve the scientist or the artist. The greatest do both and find the beauty in truth, who understand plants scientifically yet understand them as an art form. A great botanical artist must have a passion for flowers”. Berthe Hoola van Nooten and Maria Sibylla Merian ably demonstrate this passion and skill in the two works presented here.

References