



CONSERVATION AND HERITAGE COMMITTEE - ISSUE 21, MARCH 2020.

FOREWORD

Our first article, written by a team of scientists at Meise Botanical Garden describes both its history as well as the new Rose Garden, its content, layout, and the reasons for the choices of plantings. During the Regional Convention held earlier this year in Kolkata, India, it was a pleasure to meet the lecturers. The talk given by H.J. Noltie caught our attention as it dealt with the early botanists in the Calcutta Botanical Garden (as it was called at the time). These were the men who collected, catalogued and shipped on to Europe many of the plants, including roses that are now in botanical gardens worldwide. French rosiériste Dominique Massad, as always interested in conservation, has written about some of the yellow species roses which have contributed to many of the modern roses in our gardens today. The chairman of our Committee Brigid Quest-Ritson reports on what has happened since Copenhagen in 2018 with information on the Committee's projects. We conclude with notices on the upcoming Conventions in Brussels in June 2020 and Adelaide in 2021, two book reviews and a citation for an excellent and free rose website, and with a heart-felt homage to the recently deceased Baroness Lily de Gerlache de Gomery, who was the first WFRS President.

We and our authors are always interested in hearing from readers, and any article offered will be most carefully considered. We are Nimet Monasterly-Gilbert and Alan Gilbert at: alannimet@gmail.com

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THE ROSE GARDEN OF MEISE BOTANIC GARDEN

By **KENNETH BAUTERS, MARC REYNDERS, PIET STOFFELEN, and ELKE BELLEFROID**

A Short History of the Botanic Garden

Meise Botanic Garden has a long history, its origins going back to the late 18th century. Originally, the garden was under private ownership and as the owners changed so it moved from one location inside the city of Brussels to another, acquiring a different name each time. In late 1938, the Belgian government had purchased an estate just outside the Brussels area with the purpose of assigning some 90 hectares to an official State Botanic Garden (Jardin Botanique de l'Etat/ Rijksplantentuin), to which plants and part of the greenhouses were to be gradually transferred from the Brussels Jardin Botanique. It was assumed that hard work would result in a quick and dramatically needed transfer of the Botanic Garden to its final and present location, the Bouchout Domain in the Town of Meise. From the very beginning, when considering a transfer to the Bouchout Domain, Dr. Walter Robyns, Director of the State Botanic Garden, drew up a plan that included all the attributes of a model garden: the State Botanic Garden was to comprise of a rose garden, space for aquatic plants, commercial, systematic and ecological collections, a horticultural arboretum and fruticetum, a systematic herbacetum, a systematic fruticetum, a systematic arboretum, a palace of greenhouses, propagation greenhouses, an alpine garden, aspects of Belgian vegetation, an Italian garden, a collection of rhododendrons and bamboos; aquatic scenes and experimental and nursery cultures.



The Castle of Bouchout

Although, the idea of a rose garden in Meise Botanic Garden goes back to 1939, nothing really happened for forty years, until 1979 when the proposal was discussed with renewed interest by the management of the living collections department. However, being a Botanical Garden with a role in conservation, it was decided that this rose

garden should focus on wild roses (species roses, botanical roses). The collection managers started gathering wild species from all over the world, preferably wild collected material with origin data. Thirty eight years later, in 2017, the concept and design were drawn. Finally, on 5 June 2019, the rose garden of Meise Botanic Garden was officially opened.



Entrance to the Plant Palace



Balat House

The Concept of the Garden

Meise Botanic Garden had multiple reasons to put emphasis on the wild species of roses. However, the most important link with wild roses is François Crépin. He was, for 35 years, the director of the garden which at that time was the State Botanical Garden located in Brussels. Crépin collected and studied wild roses for over 30 years. An overview of his life and research is given in BAON issue 18 (Sept. 2018).

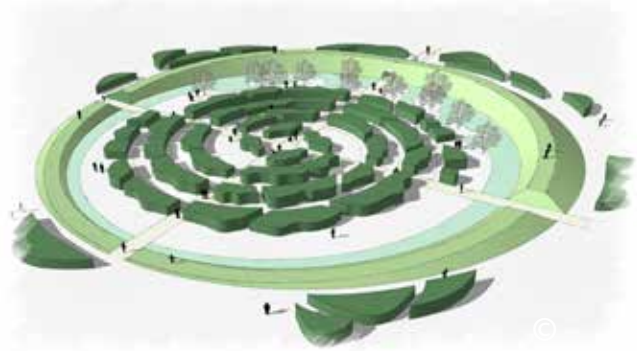
It is staggering how well-known garden roses are to the public, but how little is known about wild roses. Wild or botanical roses are the species as they occur in nature. Depending on the source, there are between 150 and 250 wild roses known of which we have currently about 100 in the Botanic Garden. Our main goal is to highlight the botanical roses and their evolutionary story. Where did they originate? Where do we find them geographically? How can we recognize different groups? These are all questions



**Layout of
Meise Botanic Garden**

that are dealt with in the rose garden. Furthermore, we carefully selected a few garden roses and we try to give an overview of the history of cultivation of roses.

The shape of the almost one hectare rose garden is inspired by a budding rose. The labyrinth at the center tells the story of the evolution of wild roses and shows how they are related following a modern, DNA based classification. Around this labyrinth a crescent moon-shaped vista hill is designed to bring visitors to another viewpoint. In the flowerbeds around the viewing point, shaped as shedding rose petals, visitors learn how garden roses were selected and developed from wild roses. This story starts with the historic Chinese and European roses and unfolds towards the origin and evolution of modern rose hybrids with a focus on resistant selections and winners from local breeders. The garden was designed by the garden and landscape architects *Buro voor Vrije Ruimte* which translates as “The Agency for free space.”



Plan of the Rose Garden

What Is a Wild Rose?

Botanical or wild roses are the species that can be found in the wild, often very different from their cultivated offspring. All botanical roses have single flowers with usually five petals; not the double flowers we so often associate with roses. Botanical roses are often loose, bushy growers but there are also a number of sturdy climbers among them. They are predominantly spring or summer flowering plants. Their height depends on the type of soil, sunlight, moisture and the location. Wild roses have many advantages: they are very strong, grow on almost any type of soil, often only need to be pruned once every five to eight years (although never pruned in the wild), and they have a natural appearance. They also grow in unfavorable, windy places where other plants do not easily grow and are extremely hardy. Despite all these advantages, they have a disadvantage for the horticulture: they often only bloom once. However, when they have finished flowering, they form nicely shaped and colorful hips.

Biogeography and phylogeny

The wild roses (genus *Rosa*; family Rosaceae) consist of about 150 to 250 species, depending on the author (e.g. 160 species in Catoire & Cruze, 2001; 200 species in Masure, 2013). These species are widespread in temperate and subtropical habitats of the northern hemisphere (with the exception of one species in North Africa). About half are found in Asia, while Europe and North America each host about a quarter each.

Recently, some phylogenetic studies have been carried out to clarify the relationships and evolution within the genus *Rosa*. Phylogeny is the branch of science that studies relationships between organisms; molecular phylogeny uses DNA to identify these relationships. From different species of roses DNA was extracted. From this DNA extract, several genes are isolated from each sample and the nucleotide sequences of these genes are then compared with specialized software. More related species will contain more related DNA sequences. Eventually, a phylogenetic tree will be modelled from which the relationships between different species can be deduced. These phylogenetic trees can also be dated and if geographical data is plotted on them, it is called biogeography.

The wild roses form a complex group. Identification is often very difficult because the morphology of different species is very homogeneous. Hybridization makes identifying species difficult. As a result, there is still a lot of speculation about the correct classification of botanical roses. For the rose garden we have chosen to use the molecular phylogeny-based classification of Fougère-Danezan *et al.* (2015). This classification largely corresponds to the morphological classifications of Catoire & Cruse (2001), Wissemann (2003), and Masure (2013)..

The ancestors of contemporary botanical roses gave rise to two evolutionary clades (= branches in the kinship tree) about 30 million years ago: (A) *Rosa*-clade and relatives (as *Cinnamomeae* clade and relatives in Fougère-Danezan (2015)), (B) *Synstylae*-clade and its relatives. Clade A (*Rosa* and relatives) contains mainly Asian and American species (plus one African and two European) while clade B (*Synstylae* and relatives) contains mainly Asian and European species (and one American species). A reconstruction of the ancestral region of occurrence, the region where the presumed ancestors occurred, suggests that now long extinct species first occurred in Asia and America. The ancestors of clade A probably spread from Asia to America. Species of Clade B are thought to have spread from Asia to Europe around 30 million years ago. Some of these species then reached North America around 17 million years ago. The oldest surviving evolutionary line is the one with the desert roses which originated around 24 million years ago

How Does This Translate to the Rose Garden?

The wild roses are planted in two spirals representing the two major clades. Clade A is represented by five sections in the first spiral: *R.* sect. *Hesperhodos* (e.g. *Rosa minutifolia*), *R.* sect. *Simplicifolia* (*Rosa persica*), *R.* sect. *Luteae* (e.g. *Rosa foetida*), *R.* sect. *Sericeae* (e.g. *Rosa omeiensis* f. *pteracantha*) and *R.* sect. *Rosa* (with two subsections: *Rosa* (e.g. *Rosa davurica*) and *Carolinae* (*Rosa virginiana*)). Most interestingly are the rare *Rosa sikangensis* (sect. *Sericeae*), the beautiful American group with *Rosa californica*, *R. gymnocarpa* and *R. pinetorum* (sect. *Rosa*), and many more wild roses.

Clade B is represented by seven section in the second spiral: *R. sect. Microphyllae* (*Rosa roxburghii*), *R. sect. Bracteatae* (e.g. the tropical *Rosa clinophylla*), *R. sect. Laevigatae* (*Rosa laevigata*), *R. sect. Banksianae* (e.g. *Rosa banksiae* f. *normalis*), *R. sect. Synstylae* incl. *R. sect. chinensis* (e.g. *Rosa gigantea*), *R. sect. Gallicanae* (e.g. *Rosa gallica*) and *R. nothosect. Caninae* (e.g. *Rosa corymbifera*). The nothosection *Caninae* is further divided in six subsections and almost all known taxa are represented in the garden. This is probably our most valuable rose collection since most of the *Caninae* material is wild collected.



Map of Rose the Garden

The Story of the Garden Roses

The history of cultivating roses goes back to more than 3,000 years in China. Also in Europe and the Mediterranean there are indications of rose cultivation since ancient times. Both in China and the Mediterranean region, the “grafting” of plants was already known at that time and desired selections could be propagated vegetatively. In the Middle Ages roses were grown for the so-called rose water. Several existing roses can still be traced back to that period. However, since the Renaissance the roses gained in importance as garden and ornamental plants, and frequently selections and hybrids emerged. All these old European roses had only one flowering period, possibly with a short repeated flowering in the summer. The Chinese garden roses, however, were re-flowering. And after the introduction of some Chinese roses to Europe, in the 18th century, crossings between different rose groups were frequently made. It took some time before they succeeded in crossing the continuous flowering character of the

Chinese roses into the existing rose groups. From the moment this succeeded, we speak of modern roses. During the history of rose-growing many groups of roses were created, yet it is only a limited number of wild species that formed the gene pool from which these garden roses originated. Around the spirally-arranged plant beds with wild roses, the story of garden roses is told. Each plant bed represents a group of garden roses. However, some modern cultivars are often intermixed with them to ensure a long flowering period. To guide through the beds, information boards summarize the most important ancestors of each group.

Old Chinese Garden Roses

Chinese roses consist of a complex mixture of botanical and cultivated hybrids that have undergone an evolution of more than 3,000 years in Chinese gardens. At the time of the Han Dynasty (141 - 87 BC), wild roses were planted en masse in the gardens of the Imperial Palace. In 1885, Dr. Augustine Henry discovered the wild, botanical species that would pass as ancestor of *Rosa x chinensis* and the Chinese roses, now known as *Rosa spontanea*. In the course of this history, this species was crossed with, among others, *R. gigantea*, *R. multiflora* and *R. luciae* to arrive at *R. x chinensis* and *Rosa x odorata*. Possibly part of this happened spontaneously because the different, double flowered, color forms of *R. x odorata* also occur spontaneously in the wild.

The introduction of Chinese roses into the western world towards the end of the 18th century is probably the most important contribution to rose cultivation. Chinese roses caused a change in the gene pool, which allowed new forms of roses to be created, for when the first Chinese roses were imported into Western Europe, between 1792 and 1824, they included ancient Chinese roses *Rosa x chinensis* and three forms of the Tea roses (*Rosa x odorata*). The continuous flowering character of the Chinese roses was a characteristic that was lacking in the old European garden roses. Also the pointed buds and curling petal tips that are so characteristic of many modern roses come from *R. x chinensis*. However, Chinese roses are less cold resistant than the European roses and also much less fragrant.



Prickles of *Rosa sericea*

The first two plant beds are centered around the old Chinese garden roses. Plants in the first bed are derived from *Rosa x chinensis* and are here represented by Rosa 'Old Blush China', also known as 'Parsons' Pink China'. This rose has been cultivated for over a thousand years in China. Other *Rosa x chinensis* derived plants are R. 'Hermosa', R. 'Mutabilis' and R. 'Sophie's Perpetual'. The second bed of Chinese garden roses are the tea-scented Chinas, derived from *Rosa x odorata*.

Old European Garden Roses

The ARS (American Rose Society) decided in 1966 to label all horticultural roses that existed before 1867 as Old European Garden Roses. 1867 is the year in which the first 'hybrid tea' rose, *Rosa* 'La France' was introduced. This is also the first hybrid between European and Chinese roses that was repeatedly flowering and displayed the typical modern flower bud.

Almost all old European garden roses carry genes from *Rosa gallica*. Within *R. gallica* itself there are many selections resulting in a large color variety. These selections are classified into the so-called Gallica roses. These are the oldest and best known roses among the old garden roses. There are even different shapes with double flowers that are sometimes found spontaneously in the wild such as *R. gallica* 'officinalis'. From here gradually more double roses were selected. An important feature of the Gallica roses is that they have fragrant flowers, which is probably the basis of their success. However, this perfume disappears when the rose petals dry, making it uninteresting for the production of fragrances (perfume). The main disadvantage is that Gallica and its derivatives only flower for a short time. In our rose garden two plant beds are dedicated to Gallica roses, amongst others we find *Rosa gallica* 'Alain Blanchard', 'Etoile Pourpre', 'Belle Isis' and *R. gallica* var. *versicolor*,

Next, we included two plant beds portraying the Damask roses. The origins of these roses have been subject to speculation for a very long time, however, recent genetic studies point towards *R. gallica* and *R. moschata* as the ancestors of the summer Damask roses. Autumn Damask roses that are repeat flowering also carry genes of *R. fedtschenkoana*.

We have one plant bed for both the Summer and Autumn Damask. A popular representative is *Rosa x damascena* 'La Ville de Bruxelles'.

Of course no rose garden can be without Alba roses. These white flowering roses are related to *R. canina* and *R. gallica* (or *Rosa x damascena*). They bloom only once and are often partly climbing plants. Pliny (23-79 AD) already mentioned white roses in his '*Naturalis Historia*'. It is generally assumed that these were Albas. We have the classic *R. x alba* 'Major' but also *Rosa x alba* 'Félicité Parmentier', named by Belgian breeder Louis Parmentier for his wife.

Rosa centifolia is not a real species, but a complex hybrid of *R. gallica*, *R. phoenicia*, *R. moschata* and *R. canina*. So it may have originated from a cross between *R. x damascena* and *R. x alba*. Depending on the use of summer or autumn damask, Centifolia roses can be single or repeat flowering. These 17th century Dutch developed roses owe their name to the presence of sometimes more than 100 petals in the flower. The centifolia rose is at the base of the European production of rose oil, which reached its peak in France. For our rose garden following cultivars were chosen: *R. x centifolia* 'Blanchefleur', 'Fantin Latour', 'Major', 'Reine de Centefeuilles' and 'La Rubanée'.

Unexpectedly, the Moss roses emerged from *R. centifolia*. This group releases a pine scented oleoresin when rubbed. Some varieties flower repeatedly. In the garden there are several examples of Moss roses, *R. x centifolia* f. *muscosa* 'Duchesse de Verneuil'.

The Roses of the 19th Century

The first crossing experiments between European and Chinese roses were difficult and led to the creation of a few rose groups that did not yet have the desired repeated flowering. This is because the gene for continuous flowering is recessive and only manifests itself when crossed back with itself or another Chinese rose. For this reason, these first hybrids are still considered old roses. The best known of these groups are the Bourbon, Noisette and Portland roses. By crossbreeding these rose groups, plants were created that bloomed multiple times, they were divided into the Hybrid perpetuals, many of them had a typical appearance of European roses. Some examples of Bourbon and Portland roses were planted in the garden.

The first Bourbon rose was found on l'Île de Bourbon in the Indian Ocean as a spontaneous hybrid between a Chinese ('Parsons' Pink China') and a European rose (the Pink Autumn Damasks) (Thomas, 2004). The result was one of the most important roses in cross breeding experiments to achieve re blooming roses. The Portland roses are a small group resulting from crossing Gallica roses with Autumn damasks. This resulted in Rosa 'Duchess of Portland', a repeat flowering plant. The latter was later crossbred with roses from other groups including *R. x chinensis*. Of course we have this iconic rose planted in the garden. Hybrid perpetual roses were popular during the 19th century. They are characterized by repeated flowering, odor and colour range (especially pink and red). They were probably derived from Portland roses.

Modern Roses

The hybrid tea rose 'La France,' introduced by Guillot in 1867, is considered horticultural unique due to its general habit of a Hybrid Perpetual and its elegantly shaped buds and the freely flowering character of the Tea roses. It was also the first rose that both repeatedly flowered and had a scent (the coveted characteristics of both rose groups). By the late 20th century, more than 10,000 tea hybrids had been successfully cultivated. Numerous new groups were developed by incrossing various wild roses such as *Rosa multiflora*, *R. moschata*, *R. foetida*. This is how the popular Tea hybrids, Polyantha and Floribunda roses, the Grandiflora's, Moschata, Pernetiana, and others were created.

The modern roses are less strictly planted in the rose garden since it often is much more difficult to deduce their ancestry. However many there are many examples from the following: Hybrid Teas, Grandifloras, Polyanthas, Floribundas, Hybrid Musk and the Persica Hybrid groups. In this section we have included many award winning roses from Belgian breeders: 'Princesse Claire', 'Minerva', 'Midsummer Snow', 'Coloma', 'Jean

Robie', 'Sweet Blondie', 'Phaedra', 'André Brichet', 'Archimedes', 'Princess Mathilde', 'Xantippe', 'Cicero', 'Jacky's Favorite' and 'Caroline's Heart'.

The Future of the Rose Garden

Conservation is one of the major goals for any botanic garden. Target 8 of the GSPC states: At least 75 per cent of threatened plant species are present in *ex situ* collections, preferably in the country of origin, and at least 20 per cent is available for recovery and restoration programs.

In Belgium, 19 species of wild, non-invasive, roses can be found. Of these only two are common, the other 17 are rare to very rare. Although most of these species are already present in the garden, we will try to collect material of all these species (and their varieties) to give the public an overview of the diversity we have in Belgium. Furthermore, this is of course of importance for the conservation of the genetic material of these plants. An example of a very rare plant in Belgium is *Rosa subcollina*. This species occurs almost everywhere in Europe, however, in Belgium only one locality is known. If plants at that locality disappear, this genetic material is lost forever, so it is of utmost importance for us to have this valuable material in our collection. Luckily, we have.



Picture of the Rose Garden
when first planted

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The Authors: **Kenneth Bauters** obtained his PhD in Biology at Ghent University with a study on the molecular phylogeny of a genus of sedges, *Scleria*. In Meise Botanic Garden he is the scientific manager of the outdoor collections and has interests in the management of trees as well. He has been involved in the choice of plants and species for the rose garden. **Marc Reynders** obtained his PhD in Biology at Ghent University, on African sedges. Specialised in tropical botany, he is currently responsible for the scientific management of the indoor plant collections at Meise botanic garden. With an interest in graphic design and translation of scientific knowledge to the general public he has been involved in the development of the garden's information boards. **Piet Stoffelen** is a botanist. Since 1999 he is working in the Meise Botanic Garden. In 2016 he became director of collections and is responsible for the herbarium, the living collections, the library and the archives, and the too little known treasure troves. Opening these treasures is one of his most important ambitions. **Elke Bellefroid** graduated as a biologist, botanist at Ghent University. After several years of research on afro-montane Aspleniaceae, she started working in Meise Botanic Garden as scientific manager of the glasshouse collections in 2010. Since 2015 she is head of the section Living Collections and Domain.

BOTANISTS IN CALCUTTA 1790-1820

By H.J. NOLTIE

This paper was originally written for an auspicious event held in Kolkata in January 2020. Rather, it was a conjunction of auspicious events: a meeting of the World Federation of Rose Societies, and the celebration of the bicentenary of the Agri-Horticultural Society of India (AHSI). This provided an opportunity to outline some of the botanical work undertaken in Calcutta and Bengal in the three decades leading up to the foundation of AHSI in 1820. This was a crucial period in terms of Indian botany and horticulture, with considerable activity on the part of individuals and institutions. The great names are William Roxburgh, Francis Buchanan, Nathaniel Wallich and the Rev. William Carey, but there are others who are less well-known. The story can be told through the lens of work I have recently undertaken at the Royal Botanic Gardens, Kew – on its collections of pre-1850 botanical drawings made for British botanists by Indian artists. These collections contain a relatively small number of paintings of roses, but many of ‘agri-horticultural’ plants.

The major base for botanical operations during the period was the East India Company’s (EIC) Botanical Garden at Sibpur, founded in 1786 by Colonel Robert Kyd who, despite what is said in the history books, was born in Leith, the port of the city of Edinburgh. Kyd was a soldier and the holder of some decidedly advanced views. Not only did he set up a botanic garden with aims similar to those of the later AHSI (i.e., with a practical bent, experimenting with plants useful to man), but wanted to be buried without any religious ceremony under an alligator pear tree in his own garden. In his will he left money to two boys to compensate them for what he saw as the affront of their having been taken from their native faith by Christian missionaries.

William Roxburgh (1751–1815)

The first paid Superintendent of the Calcutta Botanic Garden (now the A.J.C. Bose Indian Botanic Garden) was William Roxburgh, the ‘Father of Indian Botany’, who was summoned to Calcutta from the Coromandel Coast in 1793. He continued Kyd’s interests in economic botany, which he had embarked on in his garden at Samulcottah in coastal Andhra – the investigation and trialling of commercial species such as sugar cane, dye- and medicinal-plants. For the next twenty years, from the house he built for himself that stands to this day in the Botanic Garden, he continued his documentation of the Indian flora both in words and, by means of artists, in pictures. The artists he had trained in the south probably started out as chintz painters and at least one of them was taken to Calcutta, where Roxburgh built up a team of botanical artists. Their work eventually totalled some 2500 drawings, the ‘Roxburgh Icones’. His own set is still at Sibpur and a facsimile set that he sent to London is now at Kew. Only 300 of the drawings were published during his lifetime (in London, in the *Plants of the Coast of Coromandel*), but the written plant descriptions, comprising his *Flora Indica*, remained unpublished at the time of his

death in 1815. Roxburgh greatly developed the Garden with useful, ornamental and otherwise interesting plants, sent by a network of collectors and supporters from Philadelphia to Sumatra by way of Nepal. In twenty years the number of species grown rose from 300 to 3500, as recorded in the *Hortus Bengalensis*, which, like the *Flora Indica*, would be brought into existence by Roxburgh's friend the Rev William Carey.

There is no time to do justice to Roxburgh here, but he is well known and it seems more worthwhile to introduce some lesser-known figures. However, as an example of a horticultural plant included in the *Icones*, one can take the striking painting of the traveller's palm (*Ravenala madagascariensis*). Though native to Madagascar the plant was introduced to the Calcutta Garden from Mauritius by a Captain Tenant in 1802 and flowered in 1806 and 1807. Some agricultural species are also included in the *Icones*, including two species of sugar cane, *Saccharum officinarum* and *S. sinense*. Sugar was a major crop plant in which Roxburgh took a great interest and imported new varieties from abroad. *S. sinense* was sent from Canton in 1796 and Roxburgh had hopes that its harder stems would 'resist the forceps of the white-ants and teeth of the jackal' better than existing cultivated Indian forms of *S. officinarum*. It is now thought to be a hybrid between sugar cane and its wild relative *S. spontaneum*.



***Rosa clinophylla* labelled *Rosa bracteata*
Painted for William Roxburgh**

However, it wasn't only useful plants that Roxburgh imported from China. The Celestial Empire had a long gardening history, with the development of largenumbers of cultivars of plants such as paeonies, camellias, chrysanthemums and roses. Roxburgh imported at least six rose varieties from China including the

well-known *Rosa banksiae* (which he redescribed as *R. inermis*) and what he called *Rosa chinensis* (possibly what is now known as *R. indica*). He also grew Indian species and cultivars, including a native species from the mountains around Almora that he described as *R. pubescens* (probably a form of *R. brunonii*).

Roxburgh commemorated his friend the Rev William Carey in the genus *Careya*. Its best known member is the tree *Careya arborea*, but the first species to be described was a herbaceous plant, which Carey sent from northern Bengal in 1799. The drawing of *C. herbacea* is one of the *Icones* published (as a hand-coloured engraving) in the *Plants of the Coast of Coromandel*.

Adam Freer (1747–1811)

Roxburgh was trained in medicine at the University of Edinburgh, studying botany at the Royal Botanic Garden (RBGE) under John Hope in the 1770s. No fewer than thirty of Hope's students went to India as EIC surgeons including one who, while one of the most talented of all, has been completely forgotten. His name was Adam Freer and his first posting was to Syria (Aleppo); in 1781 he went as a Company surgeon to Bengal, where he spent thirty years. Almost nothing was known of this period other than Freer's role as surgeon on a mission to Nepal in 1793. In Bengal he took no part in intellectual activities such as the Asiatic Society and is nowhere mentioned by Roxburgh. He appears to have been an 'outsider botanist', perhaps of the 'White Mughal' sort, and was certainly integrated into Indian society with an Indian wife called Qudrat al-Nisa by whom he had at least two children. The children were sent back to Scotland, to Glasgow, to the care of Freer's brother Robert, a long-lived medical professor who in the 1820s was a colleague of William Hooker (then Professor of Botany there, before his move at Kew). This link may account for one of most fascinating recent discoveries at Kew: 382 drawings which show that Freer was botanically active in Bengal. Doubtless he had a herbarium that has not survived as, unfortunately, have any of his papers.

The drawings were made over a long period, by artists of two very different sorts. Two-thirds, undated but presumably the earlier, are incredibly bold and represent a pre-British, tradition in Indian art – one of geometrical stylization and lacking any interest in perspective. Later, in the period 1809–11, Freer employed, and credited their drawings, to a group of seven artists, some Muslim (including one called 'Mogul-lan'), others Hindu of the Lall clan, the best of whom was Chuni Lall. These drawings are much more Westernised in style, the result of exposure to European botanical art as models. The artists probably originated in Murshidabad, the ancient cultural capital of Bengal, which is adjacent to Berhampur, with its British cantonment, where Freer ended his days, though by this time the painters were based largely in Patna.

Freer's collection is particularly rich in 'agri-horticultural' species – crops and ornamentals – which tended to be ignored by commissioners such as Roxburgh. Might this also be a reflection of his integration into Indian society? Two examples

are those depicting indigo (*Indigofera tinctoria*) and opium (*Papaver somniferum*), crops that had formed a traditional part of Indian agriculture but were rigorously promoted by the EIC as cash crops. It should be noted that Carey's first job was the running of an indigo plantation at Madnabati, not far from Berhampore. Opium cultivation was promoted by Warren Hastings as a way of paying for Chinese tea. This pair of drawings also demonstrates the two 'schools' of artists used by Freer – the indigo is by Chuni Lall; the poppy by one of the earlier, un-named, artists who had a particularly dramatic sense of pattern-making.

Examples of fruit trees painted for Freer are pomegranate (*Punica granatum*) and guava (*Psidium guajava*). Pomegranate was probably originally native to the Middle East, but has long been cultivated in India for its fruit, which has also been extensively used as a motif in arts and crafts. Guava is a New-World species, possibly brought to India by the Portuguese. Ornaments painted by one of Freer's 'Patna' painters include myrtle (*Myrtus communis*), a plant probably also originally native to the Mediterranean and (to judge from Freer's difficulty in its identification) a much more recent introduction to India: the scarlet sage (*Salvia coccinea*) from Mexico, which Freer identified as '*Ocimum scutellarioides*'. Among garden plants Freer did not neglect the rose, and there are three drawings in the collection, a double pink, a double white, and a single pink, the last identified by Freer as '*Rosa indica*'.

Claude Martin (1735–1800)

While not based in Calcutta, it is necessary to mention, at least briefly, Major General Claude Martin, as he commissioned two of the most beautiful Indian rose drawings



Rosa indica
Painted for Adam Freer



Rosa sp. painted for Claude Martin

Francis Buchanan (1762–1829)

Like Freer and Roxburgh, Francis Buchanan was a pupil of John Hope at RBGE. He went to Calcutta as surgeon in 1794 and over the next twenty years proved himself arguably the greatest all-round Western naturalist ever to work in India. His great documentary work was not restricted to botany and zoology (in which he specialised in fish), but included archaeology, religions and agriculture. This was the field then known as 'statistics': the documentation of natural resources for human benefit (which, of course, included the commercial). Serendipitous job opportunities between 1795 and 1802 allowed Buchanan to undertake his investigations in a range of

of the period in the Kew collection – a double pink, and a double yellow. This French soldier/adventurer eventually came to rest in Lucknow, where he worked both for Asaf ud-Daula, the Nawab, and for the EIC. Like the Scottish surgeons he had wide Enlightenment interests in the arts and sciences, including botany and zoology, and had specimens recorded by Indian artists. About 600 of the stunning botanical drawings that he commissioned are in the Kew collection. Like Freer's, many show useful and ornamental plants – and are similarly almost entirely unstudied. In fact Martin did have links with Calcutta: he corresponded with Roxburgh, and introduced nine species to the Botanic Garden (not only from India, but wallflowers from Britain and narcissi from Persia). On his death he left money for the founding of La Martinière schools, one each in Calcutta, Lucknow and his native Lyon, all three of which still flourish today.

particularly rich and interesting areas – Burma, Mysore and Nepal. In Calcutta he was briefly (in 1803) in charge of the Barrackpore Menagerie for the Governor-General, Richard Wellesley.

From 1807 to 1814 Buchanan ended his career with a major survey of Bengal, commissioned by another Enlightened Scot, the Earl of Minto. This involved the recording of topography, the 'condition of the inhabitants', religion, 'natural productions', agriculture, arts and manufactures, and commerce. During this period he made a large herbarium and, with the artists Vishnuprasad and Haludar (paid 50 Rs each a month), he recorded plants not already in the Roxburgh Icones. Buchanan had always wanted to succeed Roxburgh at the Botanic Garden, which he finally achieved only in his last few weeks in India in 1815. On departure he was forced to leave the Bengal Survey drawings (including 138 plants, 244 fish and 231 birds) at the Botanic Garden. Buchanan blamed the Earl of Moira for this order ('one of those mean exertions of power, into which a weak man thrust into high authority is liable to fall') but the real culprit is more likely to have been Wallich (see below).

Copies of the Bengal drawings were made in the Garden for despatch to London, but neither the originals nor the copies reached there in Buchanan's lifetime. Their fate was unknown and has been another of the major discoveries at Kew. The drawings must eventually have been sent to the EIC Museum and Library, and reached Kew on its dispersal in 1879. The reason for their lack of recognition is the absence of information other than a botanical name – written on the front in an inaccurate clerk's hand, but on the back (though often stuck down so invisible) in Buchanan's own. The plant names (often one of his own unpublished ones) allow connections to be made with his herbarium specimens and its catalogue, so that it is possible to find out exactly where and when individual drawings were made. In the case of *Hedychium coccineum* (of which the contemporary copy also survives) it can be established that it was collected at Goalpara in 1809. Some of these drawings represent 'type' material on which new species were based – this drawing is part of the type of the no-longer recognised *H. squarrosus*, a species not described until 1853, by Wallich, but based on Buchanan's material.

The Buchanan drawings tend to show species of botanical rather than economic interest, but the collection does include two varieties of a popular garden ornamental, *Impatiens balsamina*. These were painted from a garden at Nathpur in 1810, under the Hindi names 'lal tira' and 'sada tira' (though curiously neither is white), which Buchanan intended to use these as 'Latinised' epithets as 'Impatiens laltira' and 'I. sadatira', though neither was ever published. This decorative species is native to India but is now widely grown worldwide, in a host of colours and varieties. There is no painting of a rose in the Buchanan collection, but he collected herbarium specimens of five species during the Bengal Survey. His own set of specimens he bequeathed to Edinburgh University and is now at RBGE, along with a catalogue in his own hand-writing. The catalogue includes details of locality, local plant names, and botanical synonymy. For example, what he called 'Rosa palustris', he realised

was the same as Roxburgh's *R. involucrata* (now *R. clinophylla*), for which he recorded the Bengal name 'guja', and its habitat as marshes of the Ganges.

Nathaniel Wallich (1786–1854)

Like Freer, Wallich was something of an outsider with respect to the EIC, but in a different way – he was Danish and Jewish. He started his Indian career in the Danish colony of Serampore, where he became friendly with William Carey. In 1808 the British took Serampore and Wallich's botanical talents were spotted by Roxburgh, who got him employed at the Botanic Garden. Wallich later became an EIC surgeon and would indirectly succeed Roxburgh, permanently so from 1817. He continued to develop the Garden along the lines of Roxburgh's scientific agenda, using it as a base for exploration of the flora of South and South East Asia (undertaking excursions himself to Nepal, Singapore, Awadh and Burma). With a network of collectors he built up a huge collection of herbarium specimens and continued to employ a team of artists, the best-known of whom were Vishnupersaud, Gorachand and Lachman Singh.



Rosa moschata labelled as *R. lindleyi*
Painted for Nathaniel Wallich

Between 1817 and 1828, in addition to the herbarium, Wallich amassed a collection of about 1200 drawings and when he went to London in 1828, took the drawings and herbarium with him. During a four-year leave the 'Wallich' or 'East India Company' Herbarium was curated and distributed to botanists all over Europe (the top set is now at Kew). In London Wallich selected 296 of the drawings, which were lithographed and published as hand-coloured lithographs, in large-folio size, as his magnum opus *Plantae Asiaticae Rariores*, a major collaborative taxonomic work. It is fascinating to compare how, under Wallich's instructions, the lithographer Maxim Gauci modified – or not-- as in the case of *Rosa macrophylla*, the original drawing for the print. The majority of the drawings, however, including one of the native Indian species *Rosa lindleyi* were never published and languished largely unknown, first in India House, and then at Kew, where about 1000 of them survive.

Wallich seems to have had a difficult personality, no doubt exacerbated by the climate and germs of India. He was snobbish, but also botanically old-fashioned, sticking to Linnaean classification long after it had been given up by other botanists. These would later lead to jealousies with younger, more talented, colleagues, but at this period to problems over ownership of the Botanic Garden drawings in which another of his character flaws emerged – that of inconsistency. As already explained it was probably he who had insisted on Buchanan's drawings being kept in India but then proceeded to take all his own drawings, with the Calcutta herbarium, to be left in London. He also tried to block the copying of the Roxburgh Icones for his predecessor Dr James Hare, made by some artists unconnected with the Garden. The attempted ban was unsuccessful and the results, exquisitely delicate, largely uncoloured, copies, are now at RBGE. Roxburgh's original drawing of *Rosa clinophylla* (under the name *R. involucrata*) was one of those copied for Hare. On the plus side, Wallich did start to edit Roxburgh's *Flora Indica*, but in augmenting it with his own material it got bogged down and stopped after two volumes that were published by Carey at Serampore in 1820 and 1824.

The snobbishness led to Wallich's kowtowing to aristocratic garden owners in Britain (his correspondence is full of letters to them) – he saw it as one of his duties to supply their conservatories in exchange for plants for the Botanic Garden. Locally in Calcutta this habit led to good relations between himself and the Marquess and Marchioness of Hastings.

The Marquess and Marchioness of Hastings

As part of my aim to bring to light lesser known contributors to Indian botanical studies, and as the first patrons of AHSI, it is appropriate to say a little more about the Hastings couple. Little has been written about them in a natural historical or botanical context, but their interests were both serious and hereditary.

Francis Rawdon-Hastings (1754–1826) arrived in India as Governor-General in 1813 as the second Earl of Moira, being created first Marquess of Hastings in 1816. His grandfather, a friend of Sir Hans Sloane, had started notable garden at Moira, Northern Ireland in the early eighteenth century. A souvenir of this family horticultural history is to be found in the RBGE library: an edition of the 1633 gardening book *Flora* by the Roman Jesuit, G.B. Ferrari. The RBGE copy has the Earl of Moira's bookplate, but had been previously owned by his father. One of its fine engraved illustrations is of interest in two respects: it is the first published illustration to show the seed of a flowering plant as seen with a microscope; it also happens to be of the popular Indian garden plant, *Hibiscus mutabilis*. Hastings deserves credit for his lead in three applied botanical projects in India – his foundation of the Saharunpur Botanic Garden in 1817, his patronage, with his wife, of the AHSI in 1820, and in 1823 as chair of a significant forestry scheme (for teak, sal, sissoo and bamboo), the Plantation Committee, of which Carey was secretary.

Lady Hastings, born Flora Mure-Campbell (1780–1840), was also the Countess of Loudoun in her own right, a Scottish aristocrat with typical Enlightenment interests. The pair probably met in Edinburgh where he was Commander in Chief of the army in Scotland from 1802 to 1806. On reaching India Lady Hastings sent zoological and botanical specimens to the curator of the Edinburgh University Museum, Professor Robert Jameson, and seeds to Hope's indirect successor, Professor Robert Graham, for cultivation at RBGE. An entry in the Garden Accession book for November 1820 shows one of her seed donations and reveals her interest in 'agri-horticultural' plants. It includes varieties of wheat, barley and peas; there are also plums from Basra and two Himalayan conifers, *Pinus gerardiana* and *Abies webbiana*. Through Sir Stamford Raffles Lady Hastings got his personal surgeon-naturalist, William Jack, to send a herbarium of dried plants to Jameson from Sumatra, among which is a specimen of a *Crinum*-relative called *Proiphys amboinensis*. The collection is of particular importance as, after his early death, Jack's own herbarium was destroyed in 1824 in the fire on the ship *Fame*, in which Raffles intended to bring himself, his family and collections back to Britain (the people were all saved, but the collections entirely lost).

Graphic representations of the Hastings's botanical interests have survived. In 1814/5 they made a long excursion to Upper India. With them they took the artist Sita Ram to document the trip; he recorded not only landscapes, architecture and people, but also animals and plants. The resulting albums are now in the British Library but are not well known, especially their botanical elements. These also reveal the couple's interest in economic botany, for, among many other useful plants, there are drawings of cotton (one of the diploid species traditionally grown in India, probably *Gossypium herbaceum*) and silk production. On one page is mounted a drawing of silkworms feeding on mulberry leaves; its pair shows an earlier stage of their rearing – the beautiful plaited, wicker structures on which the cocoons are placed. Also in the albums are paintings of fruit trees of the sort that AHSI was keen to cultivate, such as the lychee (*Litchi chinensis*, native to China and South East Asia) and the Tahiti gooseberry (*Phyllanthus acidus*, probably originally native to South America, but long and widely cultivated in the tropics).

The Rev William Carey (1761–1834)

On his death in 1834 his friend Wallich described Carey as 'incomparably the best, the greatest man India ever possessed – take him all in all'. This is hardly an exaggeration for Carey truly was a remarkable man. He was a self-taught shoemaker from Northamptonshire, with a passion for missionary work, and an astonishing gift for languages. He travelled to India in 1794 and was soon running an Indigo plantation at Madnabati where he started a private botanic garden. In 1800 he moved to Serampore as a missionary with William Ward and Joshua Marshman and was appointed professor of Sanskrit at the College of Fort William. His primary aim was to translate the English Bible into as many Indian languages as possible, and during his career achieved this in the case of the New Testament in over 30, all

printed at the Serampore Mission Press. For language he was heavily dependent on Indian pandits, and for designing and making the necessary fonts, on the engraver Panchanan Karmakar. This collaboration with Indian scholars and craftsmen meant that his work also had a major influence on the publication of Bengali vernacular literature.

Carey saw his serious botanical studies not only as recreation, but also in terms of a revelation of God's work almost equal to that of the Bible. He moved his Madnabati specimens to start a botanic garden at Serampore that, with a network of suppliers (through missionary connections), was almost as extensive and international as Roxburgh's. The two collections were jointly catalogued in 1845 in Voigt's *Hortus Suburbanus Calcuttensis*. Since his indigo planting days, Carey had taken a great interest in economic plants and (having seen what had been achieved in Europe in the late eighteenth century) the improvement of what he saw as the primitive state of Indian agriculture.

Lord and Lady Hastings supported Carey's missionary work, but were also interested in his botanical work. In 1820 Carey had discussions with Marchioness about the formation of an agricultural society. He wrote a prospectus and got together a group of interested people, including Bengali scholars, zamindars, philanthropists. The Governor-General and his wife agreed to be the first Patrons of the resulting AHSI and gave it its first experimental ground at Barrackpore. Its garden later moved Alipore, then to the Botanic Garden at Sibpur, before ending up on its present site (once again in Alipore) in 1872.

While, botanically speaking, the AHSI is one of Carey's greatest monuments, there are also a few visual mementoes. In 1828 he presented 35 drawings of plants and insects to the Linnean Society in London. 22 of these show the life-cycles of insects and their plant hosts. The documentation that must surely have accompanied them is sadly lost and the drawing of the insects is not very accurate, which makes identifications problematic. One of the major pests of rice is known as the rice swarming caterpillar, which may be one of no less than four different species shown (in various developmental stages) in his rice illustration. The note on the drawing of mustard (*Sinapis alba*) states that the insect depicted causes a 'lakh of rupees' worth of damage to the mustard crop of Bengal, so is most probably intended to represent the diamond-back moth. At Kew I recently discovered two small drawings given to Wallich by Carey in 1827. These show a *Lagerstroemia* species and an *Osbeckia*, perhaps drawn from specimens in the Serampore garden. Of no great distinction artistically or in terms of botanical interest, they must have been kept by Wallich as mementoes of his friend and I wonder if the drawings might actually be the work of Carey himself?

Carey was also a friend of Roxburgh for whom he performed a great, if largely posthumous, service – the publication (at the Serampore Mission Press) of *Hortus Bengalensis* (in 1814), and the second and complete edition of *Flora Indica* (in three volumes, without Wallich's additions) in 1832. In *Hortus Bengalensis* eighty

introductions to the Calcutta Botanic Garden are credited to Carey. One of these was *Rosa clinophylla* (which Roxburgh called *R. involucrata*) sent to the Garden in 1797 as from 'Bootan', but probably actually from Cooch Behar. Remarkably in the RBGE herbarium, is a specimen of the rose sent by Carey to William Hooker in Glasgow in the 1820s.

Afterword

Anniversaries provide opportunities for reflection and the giving of credit to the achievements of our forebears. There is a current rage for denying that anything good whatsoever came out of the Colonial encounter, but I would venture to suggest that the work discussed here shows otherwise. The botanists made a major contribution to the study of the botanical biodiversity of India, which involved a major contribution by the Indian artists of the plant drawings. These works, in a hybrid Oriental-Occidental style, are both beautiful works of art and important scientific illustrations. The work of the AHSI, which acted as the unofficial agricultural department of the Government of India for several decades, played a significant role in the agricultural development of the country. The lychee, for example, as depicted for the Society's first patrons was then a recent introduction to India, the country that is now the world's number two producer of the fruit.

* * *

Henry Noltie is a Research Associate of the Royal Botanic Gardens of Edinburgh and Kew. For 32 years he was employed at the former, where his work included the curation of exhibitions, taxonomic research on monocots of the Sino-Himalayan region, and latterly on the history of Indian botany. as seen through the lens of the rich collections of herbarium specimens and archives, and the botanical drawings made by Indian artists for East India Company surgeons.
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The photographs included in this article were provided by the library at Kew with the permission of the Board of Trustees of the Royal Botanic Gardens, Kew.

YELLOW, YELLOW, YELLOW!

By DOMINIQUE MASSAD

At the end of the 19th century, there were some very beautiful yellow roses, descendants of Chinese varieties, but none were of a luminous and pure yellow. However, the color was unstable in all of these roses due to the flavonoid type pigments. Depending on the temperature, the yellow turns pink or peach as in 'Gloire de Dijon' or 'Mme Bérard'. Therefore, when Joseph Pernet-Ducher, the celebrated Lyonais rose breeder, known as the "magician of roses," introduced 'Soleil d'Or' it was a true revolution in the rose world. Thanks to carotenoid pigments our gardens could finally be filled with warm luminous colors.

These tones, most especially this lovely yellow, are characteristic of several species belonging to the *Pimpinellifoliae* section of the genus which grow wild in what is known as Asia Minor, from Iran, Afghanistan and Armenia, extending to western China. In addition to their color, they possess several other interesting features, such as a lovely foliage, the leaves of which have many leaflets, the canes are of a brownish-red, and they are early-blooming. However, they do also have faults: a weak scent, if any, and being prone to black spot due to *Marssonina rosae*.

From the 18th century, their ornamental features won over amateurs and have been present in our gardens. Let us look at these species and their cultivars.



'Gloire de Dijon'
Journal des roses 1877



Rosa ecae

Rosa ecae:

It was introduced to Europe in 1880 by James Edward Tierney Aitchison who named it in honor of his wife Eleonor Carmichael. It is a suckering bush with many branches which can reach 1.50 meters high. It blooms only once in Spring. The blooms are small (2 to 3 cm) but present in great numbers. Delicate to cultivate, it prefers hot and sunny exposures and well drained soil.

Among the descendants of *Rosa ecae* are 'Helen Knight' which has larger flowers, and *Rosa primula* with paler blooms but with a subtly aromatic foliage. The breeder E.F. Allen in the 1960's released 'Golden Chersonese,' the leaves of which are scented.



'Helen Knight'



Rosa primula



'Golden Chersonese'

***Rosa xanthina*:**

The species originated in China, where the double-petaled variety has long been cultivated in their gardens, and from where it was introduced into the West in 1907. When grown in dry well-drained sandy soil it can form a lovely domed bush reaching three meters in height.



Rosa xanthina



Rosa xanthina* sp *hugonis



'Canary Bird'

The species, which is quite variable, has been a parent to several interesting forms, cultivars and hybrids: *Rosa xanthina* f. *hugonis*, best known for the strong color of its blooms; 'Canary Bird', most likely a hybrid; and 'Albert Edwards', bred by Hillier (U.K.) in 1961 whose blooms are lightly scented.

Rosa foetida

(formerly known as *Rosa lutea*)

This species is the most important in the breeding of all modern roses which are either yellow, orange, salmon or bi-colored. It is very widespread in the Central Asian steppes (its natural habitat) where it can grow to three meters with few prickles. The foliage is lightly-scented and the flowers are medium in size (6 cm). It has been grown in Europe for some centuries. This species has given us two cultivars:



Rosa foetida



***Rosa foetida* 'Bicolor'**

Rosa foetida 'Bicolor', sometimes called *Rosa punicea*, and known since the 16th century, is remarkable for possessing blooms whose petals are a nasturtium red but whose reverse is yellow. Often canes are covered with only yellow blooms which indicates that the bi-color trait is probably due to a natural mutation. It is an easy rose to grow in warm conditions.



***Rosa foetida* 'Persian Yellow'**

Rosa foetida 'Persiana' or 'Persian Yellow,' has a double petaled bloom and was introduced in Europe in 1837 by Sir Henry Willcock. This is the rose that Joseph Pernet-Ducher would use in his hybridizing to obtain 'Soleil d'Or'.

In *Le journal des roses* (June 1900 issue), Pierre Cochet wrote that "It has been since 1883 that M. Pernet-Ducher had been searching through breeding to obtain varieties crossed with reblooming traits." This skilled rosarian was haunted by the superb yellow color of 'Persian' (yellow) from which he desired to create a reblooming variety. This seems a bold undertaking, as "Lady Nature" is fickle and not easily led and often, especially when it comes to plants, one often obtains the exact opposite of what was desired. However, Monsieur Pernet-Ducher remained stubborn and made a great number of crosses with reblooming roses, always using 'Persian Yellow' as pollinator. After numerous trials he noticed that the rose 'Antoine Ducher' lent itself better than any other to being crossed with *Rosa lutea*.



'Antoine Ducher'

In 1888 several seedlings sprouted from these trials and were put in the nursery where they bloomed. The plants were certainly curious, most interesting from the botanical point of view given their variations, but none were thought to be commercially viable. Only one stood out in 1891 and 1892 when it bloomed. The rose was semi-double, the petals were bright pink, their base white, the reverse of the petals a pale yellow, and with the unpleasant scent typical of *Rosa lutea*. It would have probably been put aside and forgotten had the following not occurred.

During a pleasant conversation between Pernet-Ducher with the editor of “*Lyon-Horticole*,” Viviani-Morel, the latter challenged his friend to show him the descendants of *Rosa lutea* from which another Lyonais horticulturalist by the name of Alégatière had never been able to get seedling to germinate. The following season, in May 1893 when the time came for the above-mentioned semi-double rose to bloom, M. Viviani-Morel was given satisfaction. But when going to collect the samples for his friend, M. Pernet-Ducher noticed that another plant had grown beside his semi double pink one and, while smaller in size, held very full blooms which were of a lovely yellow: ‘Soleil d’Or’ was found.



‘Soleil d’Or’



‘Mémé Buy’

‘Soleil d’Or’ was immediately grafted several times and carefully studied. In 1896 it rebloomed a second time. The canes which held reblooming flowers were carefully selected and produced repeat-blooming plants. It is to be noted that while the plants that were grafted in 1893 at first only rebloomed only haphazardly they began in time to rebloom consistently as the variety took several years to stabilize this trait.



‘Bettina’



‘Docteurs Massad’

‘Soleil d’Or’ possesses traits from both of its parents and gave birth to a new class of roses: The *Pernetianas*. Many roses with dazzling colors were bred, like ‘Mémé Buy’ and ‘Souvenir de George Pernet.’ Used intensively by breeders in crosses with Hybrid Teas, these *Pernetianas* lost their distinctive characteristics and by 1920 were merged with the Hybrid Teas. But it is thanks to them that the yellow of ‘Allgold,’ the orange of ‘Bettina,’ and the contrasting colors of ‘Piccadilly,’ ‘Docteurs Massad’ and ‘Kronenbourg’ dazzle in our gardens today.



‘Kronenbourg’

* * *

Dominique Massad is a breeder of roses with a keen interest in history. He is a prolific writer and lecturer, with a special interest in Nabonnand and Guillot roses. This article was inspired by part of a lecture which he gave in Lyon for Roses Anciennes en France in the context of a series of lectures entitled “Les roses botaniques et leur apport dans la creation des roses pour nos jardins”. His email is: dmassad@free.fr

Report from Brigid Quest-Ritson, Chairman of the WFRS Conservation & Heritage Committee

The Conservation & Heritage Committee meeting in Copenhagen in 2018 was well-attended, lively and enthusiastic. Delegates and observers have confirmed that the meeting made good progress and that more was likely to follow in the next three years.

What has happened so far?

Early in September 2018, the Conservation & Heritage Committee acquired a page of its own on the new WFRS website. On this page, all issues of BAON right from the beginning are now available to download. Later on, an index (kindly compiled by Crenagh Elliott) was added. New issues of BAON are added on publication. The index will be updated each year.

The Conservation & Heritage Committee page also gives links to the searchable rose collections at Europa-Rosarium Sangerhausen and the Roseraie du Val de Marne. We are keen to add more links to large collections of heritage roses that have an easily searched database. Our page also has a link to the Helpmefind database.

We intend to upload a new series of short descriptions of the various heritage rose groups: Gallicas, Chinas and Noisettes are up already. Further groups will be added during the coming months.

Delegates to the Committee are nominated by National Societies for the three-year period between Conventions. This process takes time, so the new Committee was not finalised until December 2018. I wrote to all delegates to welcome them and, from their replies, we have learnt much about Conservation and Heritage in their countries. After consultation with the Executive Director, Inés Diaz di Licandro from Uruguay was appointed to act as Vice-Chairman of the Committee until 2021.

In April 2019, several members of the WFRS were asked by local members of Heritage Rose Groups in Australia to submit objections to the draft 20-year plan for the Royal Botanic Gardens at Melbourne that proposed removing the species rose collection. I wrote immediately on behalf of the Committee and later received a reply to say the matter had been reviewed and the rose collection would be preserved, but in a different area of the gardens.

At the Copenhagen meeting, delegates sought to establish a panel of rose experts to help with the identification of unknown roses. In May 2019 I therefore wrote to all 25 delegates to the Conservation and Heritage Committee asking them to suggest rosarians who could be invited to join the panel. These experts would include both those with a wide general knowledge of rose groups and those with expertise in a particular area, e.g. species,

Gallicas, Teas. Some two thirds replied. I contacted all the experts suggested by delegates and received very encouraging and supportive letters in reply. Some countries suggested individuals, others a group that would work together as a team, while others named a panel member who would pass on requests within their society or country. The Rose ID Panel is constructed as an informal discussion group with the chairman as intermediary. The panel currently numbers around 30 members.

Opinions vary on the information that should accompany requests to identify a rose. The 'Rose ID request info' as published on the website is deliberately a simple option, designed not to discourage enquiries. In fact, we have found that enquiries follow the practice in the country making the request.

To test the system, four beautifully prepared samples were submitted from Argentina and sent to suitable panel members. We all know how hard it is to identify an old rose. The safest way is to take a living specimen and match it with a named plant in a rose-garden. Sometimes just one photograph is enough, if it is seen by an expert who recognises it. But an informed suggestion can be very helpful. One of our samples was recognised and identified quite quickly; another has been identified after a process of deduction and comparison. Work continues on the remaining two. Preparing a submission takes time. We hope that, as the flowering season in the Southern Hemisphere draws to a close, more requests for identification will be received. The panel is ready for action.

We look forward to the WFRS Heritage Rose Conference at Brussels in June. Conservation & Heritage Committee delegates will meet there to compare successes and problems in their own countries. The agenda for that meeting in Brussels was discussed at the WFRS Regional Convention in Kolkata. In addition to the regular items, such as the local reports from delegates, there will be several pressing topics relating to the conservation of roses – methods, successes and problems. The problems caused by the drought and subsequent bush fires in Australia have lessons for us all.

A FINAL FEW WORDS FROM THE EDITORS

When we were asked in early 2015 to become editors of “By Any Other Name,” which had a magnificent run from Issue #1 In March 2008 to its last issue #11 In April 2014, we said Yes we’ll give it a try. Our first issue BAON#12 (to continue the series) went online in July 2015, and we’ve been putting together BAON ever since, currently #21 for this month. It has been fun and a pleasure all the way, with our thanks to the wonderful writers, without whom it could not have happened, and to the feedback from readers from all over the globe who have encouraged us. But all good things end. We plan to make BAON#24, to be issued right before Adelaide 2021, our last, and we have so notified the WFRS leadership to start their search now for a new editor or editors. ANYONE interested should contact in confidence the C&HR Committee Chairman Brigid Quest-Ritson (questritson@aol.com) and/or Derek Lawrence, Executive Director (dereklawrence@talktalk.net) It can be a tremendously satisfying and creative experience as it has been for us, your editors, Nimet and Alan.

15th International Heritage Rose Convention Belgium 2020

Under the auspices of the World Federation of Rose Societies, the Belgium Royal Rose Society is pleased to host this event.

Belgium's love of roses may have started with the Emperor Charlemagne who encouraged that roses be planted. It is also the birthplace of P.J. Redouté whose work all lovers of Heritage roses are familiar with. Many other famous names such as Parmentier, Crépin, van Houtte and Lens have contributed to making Belgium renown throughout the world of roses. It is therefore most appropriate that this upcoming convention be held in Brussels.

Readers of BAON will have encountered Crépin in Issue #18, and in this edition they will get an overview of one of the gardens we will be visiting, Meise Botanical Garden.

The Belgium Royal Rose Society has put together an excellent program, and we encourage you to consult their website for the complete schedule including the subjects of the morning lectures. WWW.ROSABELGICA2020.COM

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MAIN PROGRAM JUNE 8-12, 2020

Monday June 8

06:00pm Opening Ceremony, followed by Meet&Greet, Palais des Academies

Tuesday, June 9

Morning: 5 Lectures at Cercle Gaulois, Brussels

Afternoon : Hex Castle and its rose gardens, Aldenbiesen Abbaye, Widooie private estate, free evening in Brussels

Wednesday, June 10

Morning: 5 Lectures at Cercle Gaulois

Afternoon : Meise Botanical Garden, Wespelaar Arboretum and Garden, Casteels Rose Nursery, Dinner at Vrijbroek Domain

Thursday, June 11

07:30-09:15, meeting of the Conservation & Heritage Group (before lectures)

Morning: 5 Lectures at Cercle Gaulois, lunch at Cercle Gaulois

Afternoon : Le Roeulx Rose Collection, Enghien, City of Parmentier, Free Evening

Friday, June 12

Morning: Coloma Rose Garden Afternoon: Choice of tours: Private Gardens, Brussels Historic Center & monuments. 08:00pm **Closing Dinner** at Cercle Gaulois

OPTIONAL TOUR IN NORTHERN BELGIUM JUNE 5-8

OPTIONAL TOUR IN SOUTHERN BELGIUM AND LUXEMBOURG JUNE 13-15

HERITAGE ROSES IN AUSTRALIA

The World Federation of Rose Societies 19th World Rose Convention will be held in Adelaide, Australia, from 21st to 28th October, 2021.

South Australia is renowned for its outstanding climate for roses and heritage roses feature in many gardens. Roses have been available through local plant nurseries from the very early years of English and German settlement in South Australia. It is believed that a number of these early settlers brought cuttings of roses with them to remind them of their homelands. As a heritage rose devotee I have personally found many rare and unusual heritage roses surviving in old gardens, cemeteries and on roadsides in this State. These roses have been propagated and distributed to ensure their long-term survival.

Heritage Roses in Australia has a representative on the Planning Committee and we are pleased to let you know that there will be lectures and gardens which will feature heritage roses during the Convention. We will have HRIA members present in gardens to be of assistance to attendees as well in other Convention events.

Heritage rose lovers are encouraged to register their interest by joining the mailing list so that they can be kept informed regarding the programme, tours, accommodation and registration. Please visit the Convention website: www.wrc21.aomevents.com.au to join the mailing list and receive updates.

Patricia Toolan

President



ABN 25 596 618 306

ARB 628 255 587

Incorporated in South Australia

www.heritageroses.org.au

www.facebook.com/www.heritageroses.org.au

WHAT WE HAVE BEEN READING

THE HANDBOOK OF WILD ROSES IN JAPAN

By Yuki Mikanagi with photographs by Koichi Osaku

This new guide by Yuki Mikanagi, former Chairperson for the Conservation and Heritage Committee, is an in-depth study of the 17 wild roses found in Japan, thanks to the amazing and unique color photography of Koichi Osaku, using the “focus-stacking technique” that he employed for illustrating the author’s previous book on Old Roses in Japan (reviewed in BAON#18, September 2018). All the parts of wild roses—not just flowers and plants, but the details of leaves, stems, hips—are closely observed, and their botanical features, which are usually described with difficult technical terms, are made visually clear. Although the book is in Japanese, each rose’s correct name in standard English nomenclature is at the top of each page.

To each species, at least six pages are allocated. The first for each shows a photo of a flowering stem of the species, gives its scientific name (the latest one), and explains its distinguishing features and its distribution. The second page is of photos of the total view of its flower (from different angles) and of its parts (even the inside of the bud), with information on its inflorescence, the number of flowers, size, fragrance and unique features of its sepals. The third page gives the photos of its leaf and stipule, and of its prickles, and explains the specific features of these parts. The fourth page gives the photos of its hips (including their inside), seeds, and the appearance of the bud in winter, as well as explanations of them. The fifth page gives the photos of the total plant in its flowering and ripening seasons taken in its natural habitats and the explanation of their features. On the last (sixth) page, there is information on its cultural backgrounds, its uses, and any changes in its scientific name, etc. Further, several pages are spared for similar information on each of its natural hybrids, and on species and some related roses introduced from abroad and used as garden plants in Japan.



This is a unique guidebook, which can provide a newcomer with a unique and stunning visual education in the botany of roses. We would hope it and her other title will someday be available in English, but until then, this is well-worth the effort to purchase.

There are Japanese-language bookshops in a number of countries which should be able to order the book from its publisher. Also, try the site: amazon.co.jp in English.

**Published in 2019 by Bun-ichi Sogo Shuppan, Tokyo, Japan,
ISBN978-4-8299-8136-8**

Review by Akira Ogawa. He is a member of the Japan Rose Society who was crucial for the success of the 14th WFRS World Convention held in Osaka, Japan in 2006.

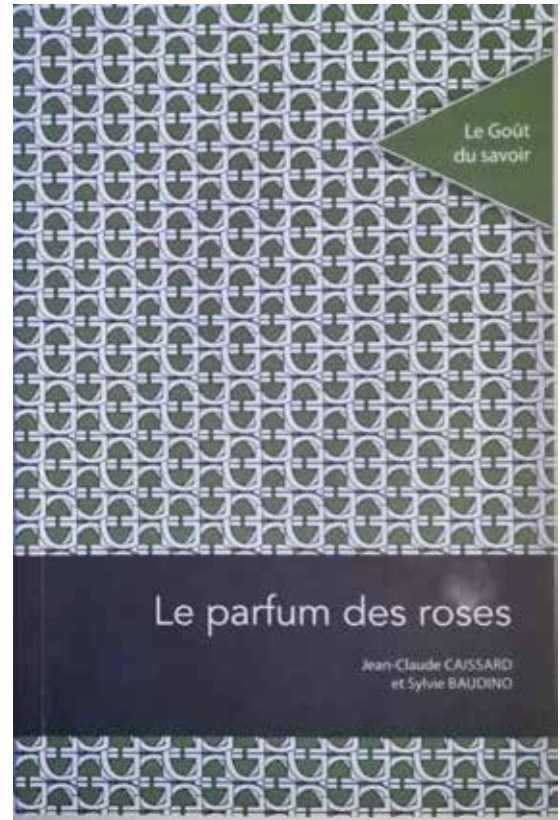
LE PARFUM DES ROSES

By Jean-Claude Caissard and Sylvie Baudino

Precious gems come in small packages. Which is the case of this 102 page book published by the University of St. Etienne. It is one in the series of 'Le Goût du savoir' editions, part of l'Université Pour Tous (Open University). The authors have managed to cover in the seven chapters both the history of the rose but also have cleverly been able to end each with their topic of research, scent and perfume. The few repetitions only add to reinforce what the reader ought to retain. The final chapters dealing with the 20th century are not only more scientific but go a long way to explain why cut roses, until recently have little scent as well as the dichotomy between botanists and scientific researchers. The authors major breakthrough in identifying along with their team of researchers are responsible for being the first to identify the key gene (RhNUDXI) which holds a key to the scent in roses. It is rare to find a book written by such well-known scientists that is such a pleasant and informative read. The book in French is planned to be available in the near future in English. It can be downloaded but many of us still prefer to turn the pages of a book: ISBN 978-2-86272-701-1

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<https://publications.univ-st-etienne.fr>



To “BAON” readers: we highly recommend the online journal titled “SINGULARLY BEAUTIFUL ROSES”

If you have enjoyed this issue of “By Any Other Name,” and/or any of our previous issues, then we want to call our readers’ attention to another wonderful journal entitled “Singularly Beautiful Roses,” an online creation by Stephen Hoy, living in Georgia, U.S.A. From the beginning he has dedicated the publication to “Single, nearly single, and semi-double flowered roses,” and it is a wide subject field. His current issue (Volume 10, 2019-2020) is a 14-page brilliantly written essay, on the great New Zealander Sam McGredy, with more than 30 photographs of his roses in brilliant color. A previous issue (Volume 9, Fall 2018) was dedicated exclusively to “*Rosa roxburghii* and Its Legacy,” again heavily illustrated and beautifully researched. The layouts for the issues that we have seen, plus their very personal design and typography make each a reading pleasure. Like “BAON,” Stephen Hoy’s journal “Singularly Beautiful Roses” is distributed online and *gratis*. Simply email to him, with your name and address, and he will do the rest: Stephen Hoy @hoy127@cox.net

**HOMAGE TO THE LATE
BARONESS LILY DE GERLACHE DE GOMERY**

It is with profound sadness that I announce the sudden passing of our founding President, Baroness Lily de Gerlache de Gomery.

Baroness Lily had a deep passion for the rose, which was nurtured from an early age. As a young woman her affection for this evocative flower grew to such an extent that she developed an enchanting rose garden at her home in Brussels and became a highly respected rosarian. She was elected President of the Royal National Rose Society of Belgium. During her term of Office, the society captured the imagination of the general public and it flourished. When the World Federation of Rose Societies was founded in 1968, Lily was the natural choice to become the first-serving President.

Baroness Lily's enthusiasm and dedication for the rose remained steadfast throughout her remarkable life. She touched the hearts of thousands of rosarians from all corners of the globe and enriched their lives by her infinite knowledge and friendly comradeship,

Baroness Lily faithfully served the World Federation of Rose Societies with distinction for over half a Century. Her passing is an immense loss to the rose world. Her legacy to encourage all countries to unite in warm friendship and shared wisdom for the *genus rosa* will live on within the heartbeat of the organisation. It is an added sorrow that she will not witness the 15th Conservation & Heritage Convention in her own country with her daughter as President of the Federation.

May this Grande Dame de la Rose rest in eternal peace where roses flourish and bloom to eternity.

On behalf of the World Federation of Rose Societies, I wish to extend my sincere condolences to her daughter WFRS President Henriette de Briey and her family.

Derek Lawrence

Executive Director
The World Federation of Rose Societies