Rose Breeding before 1800 in Germany

The subject of rose breeding in Western Europe between the Middle Ages and 1800 is particularly fascinating, for this is the period in which we see the beginnings of a development that was to lead to the creation of the many rose varieties that give us so much pleasure today. If we examine this period, several questions arise, among which are:

Were roses bred as early as in the Middle Ages or the Baroque period?
Who was it, above all in Germany, who sowed rose seeds and selected the best seedlings?
Was artificial pollination of roses practised before 1800?

A talk of this kind cannot provide exhaustive answers to these wide-ranging questions, but an overview is possible. Follow me now in a search for information, on a journey through four centuries of rose history:

Rose Breeding in the Middle Ages, Renaissance and Baroque Era

A very early indication of rose seed planting in Germany can be found in the „Pelzbuch“ of Gottfried von Franken. “Pelzen” here meant budding or grafting in the widest sense. This manual was published around 1350 in Würzburg and was translated into various languages. The treatise concerns itself above all with viticulture and the grafting of fruit trees. But the text mentions three roses: The White and the Red Field Rose and a white garden rose. Petals of the Field Roses were fermented in order to improve the taste of the wine.
Roses were propagated from seed:

„Wie man rosen bekomen schull.
Rosen chern, wenn die gar czeitig werden,
die sä man, als man auch andern samen sät,
jn dem Merczen oder jn dem Hornung“.[1]

In other words: „To obtain roses. Ripe rose seeds are sown, when other seeds are sown, in March or in February.”

It is possible that this indicates some element of rose breeding. Perhaps only the biggest hips of wild roses were sown in the hope that the seedlings derived would also yield big hips. But the “Pelzbuch” does not say anything about their selection.
This would, however, have been enormously helpful for the collection and processing of hips, whose pulp was used to produce a syrup.

With the end of the Middle Ages we also see the early stirrings of a desire to grow flowers for decorative use and to display them in the garden in various colours. Colour was the thing**!** In this period**,** however, West European flora showed little diversity of species, which explains why in time foreign introductions like snowdrops (*Galanthus nivalis* L.) or lilacs (*Syringa vulgaris* L.) were taken up with so much interest and enthusiasm.

[1]see Patzlauer Pelzbuch. Cod. XVI E 32. 15. Jahrhundert. Nr. 49

Of course, the Gallica Rose was known in Europe as long ago as 1350, but in those days the only double garden rose in Franconia was the Alba Rose. So they hit on the genial idea of using a thick needle to bore a hole in a cane under a bud and squeezing deep red, blue, yellow and green pigment into it.[2] Evidently this old technique succeeded in creating a change of petal colour, for we find it still recommended in gardening books as much as 300 years later.

During the Renaissance and in the Baroque era the enthusiasm of florists was directed above all towards tulips, carnations, anemones, ranunculus, hyacinths and auriculas and much money was spent on them. But there were always some flower lovers who did not follow this trend and considered the rose to be the queen of flowers.

The first rose monograph in German – *Rhodographia*[3] by Johann Wittich of Dresden – appeared as early as 1604. This small book describes not only wild roses but seven garden roses and gives a detailed account of how roses could be used medicinally. (By the way: he advises those suffering from constipation to eat three or four Musk Rose buds.)

By 1613, 21 different rose varieties and forms could be seen in the garden of the bishop Johann Konrad von Gemmingen in Eichstätt, a small city in Bavaria.
The roses in this garden were carefully chosen to evoke admiration.
Beside wild roses like the Dog Rose, Sweet Briar (*R. rubiginosa*), Burnet Rose, Austrian Briar and Cinnamon Rose, there were various cultivated roses. Among these were types of the French Rose, Damask Rose, Musk Rose, Sulphur Rose, White Rose and the Cabbage Rose.
The bishop commissioned the painting of the plants in his garden and these paintings formed the substance of a sumptuous and expensive publication: "Hortus Eystettensis".[4]

The bishop was not alone in his passion for plants, however. Indeed, in this period, particularly in the Netherlands and Germany, there were prosperous garden lovers who were prepared to spend huge sums to outdo other plant collectors.
It seems that they paid captains, merchants and travellers handsomely for rare plants, not least rare roses from the Far and Near East – from India as well as from what is today Azerbaijan or Iran[5]. Since some of these exotics were so expensive, they were jealously guarded.

In 1710 the head gardener and author Heinrich Hesse described precious and tender „Indianische Rosen"[6] found in Dutch collectors` greenhouses and orangeries, for example double musk roses in the various colours – purple, purple with white streaks and white with red streaks – that bloomed from the end of August until the beginning of winter. These were grafted onto *Rosa rubiginosa* L.[7]
One of these roses was considered mistakenly by Hesse to be the rose-coloured perpetual flowering Autumn Damask Rose "Rosa italica perpetua sive omnium mensium". He writes: This beautiful rose also arrived in Holland years ago from India. In its canes, its form and its perfume it resembles the Damask Rose, and its foliage is evergreen. The blooms, purple streaked with white, are held in clusters.[8]

---

[2] see for example Codex Pal. Germ. 286, Megenberg, Konrad von: Buch der Natur und Gottfried von Franken: Pelzbuch. 1442
[3] see Wittich, Johannes: Rhodographia. Dresden 1604
[4] see Besler, Basilius: The Besler Florilegium. New York 1989 or: Hortus Eystettensis/ Der Garten von Eichstätt. Das große Herbarium des Basilius Besler von 1613 Nachdruck. München 2008, p. 94 – 99
[5] Hesse, Heinrich: Teutscher Gärtner. Leipzig 1710, p. 46
[6] "Indian plants" was a term used for plants from the Far East and America, which were not frost-hardy; the term "Roses" may have included plants with rose-like blooms
[7] Hesse 1710, p. 81
[8] Hesse 1710, p. 86

According to Wimmer, only some of these roses, probably the most frost hardy, found their way onto the market and many of them have been lost. [9] The same was true of the *Rosa chinensis* Jacq., that Jan Frederik Gronovius possessed in Leiden around 1733. A herbarium specimen in London proves its existence. About fifty years later a rose of this name was marketed by a German nursery in Berlin and was grown in Kassel.

Planting of roses in the pleasure gardens of the Baroque period was limited to a few bushes (later standards) in the borders and to decorate leafy walks. Roses were also used for hedging.[10]
But hardly a garden – however small it might be – could be found where there was no rose. [11]
In general it was the twelve garden roses, known throughout Europe, that were grown:

1. Rosa Centifolia
2. Rosa alba plena
3. Rosa maculata flore pleno
4. Rosa menstrualis or Mondrose /flore pleno rubro
5. Rosa muscata or Damascena flore albo, pleno
6. Rosa muscata simplici or Rosa autumnalis
7. Rosa Turcica flore luteo pleno
8. Rosa Turcica flore luteo simplici
9. Rosa Turcica, flore purpureo pleno
10.Rosa Turcica, flore purpureo simplici
11. Rosa provincialis, flore rubro
12. Rosa persica, flore albo & purpureo and others[12]

Thus the average range of roses had by 1710 remained substantially unchanged for a hundred years.

In the 17th and 18th centuries there were already many garden plants that were in large part the result of breeding activity. This is proved by instructions regarding their sowing, by plant lists and paintings of the period. It is amazing that in the late Baroque period many hundreds of varieties of carnations, anemones and ranunculus existed! Around 1790 there were more than 1000 varieties of hyacinths on the market!
Still, before 1700 there was usually no understanding of the reason why different varieties emerged from the seeds they planted. It was clear that God had created the wonders of nature.

[9] Wimmer, Alexander Clemens: Rosen im Barockgarten. in: Zandera 9 (1994), Nr. 2, p. 51
[10] Wimmer, 1994, Nr. 2. p. 53
[11] Dümler, Wolfgang Jacob: Erneuerter und vermehrter Baum- und Obstgarten. Nürnberg 1664, p. 376
[12] Hesse 1710, p. 712 (This roses are probably: *Rosa x centifolia* L., *Rosa x alba* (Loisel. et Michel) Rowley, *Rosa gallica* var. *versicolor* L., *Rosa damascena* var. semperflorens (Loisel. et Michel) Rowley, *Rosa moschata* var. *plena* West., *Rosa moschata* Herrm., *Rosa hemisphaerica* Herrm., *Rosa foetida* Herrm., *Rosa gallica* var. *officinalis* Andr., *Rosa gallica* L., *Rosa x damascena* Mill., ´York and Lancaster´)

But gardeners pondered as to whether this or that method might be employed in support of these wonders.
Some thought that good soil and manuring might produce new forms. From time to time there were attempts to improve the scent of flowers by winding a wreath of particularly fragrant roses around the roots of another flower when planting it. [13]
Others thought that the position of the stars and the planets had an important influence on the growth of plants and that they exercised a powerful influence on the formation of new varieties. Advice according to cosmological principles is a common feature of pre-1720 gardening books.[14]
A change in the colour or the number of petals was also thought to be caused by the different phases of the moon, and only the White Rose or the "Rosa Morlion" sometimes set seeds. In the Baroque period, the climate of Western Europe was colder than today and it is therefore probable that many rose seeds did not ripen. Besides, the propagation of roses from seed is a lengthy process. So in many old books on gardening we even find advice not to sow rose seeds[15] and in general roses were propagated by means of suckers.[16]
Moreover, Gardens were mostly very neat in appearance, that is, there was much pruning and only rarely were blossoms tolerated once their blooming was over. It was therefore almost impossible for chance seedlings to survive in these gardens.

There were, however, new ideas emerging in this period:

In antiquity it was already well known that palm trees could be either male or female. Generally a better crop was had when the female flowers were artificially dusted with the pollen of the male flowers.
Two thousand years later it was discovered that most flowering plants supported male and female organs within a single blossom.
Here we can mention only the names of Nehemiah Grew[17] of London, who in 1682 put plants under the microscope and named their individual parts and functions; Professor Rudolph Camerarius of Tübingen, who in 1694 proved that pollen was needed to produce fertile seed[18]; and Carolus Linnaeus, who in 1735 created a botanical classification system based on the number and type of the sexual organs[19].
It seems this knowledge had little practical effect in Germany before 1760.
The breakthrough came with the experimental crosses performed by Joseph Kölreuter. His books were distributed in Germany and gave a powerful impuls to the breeding of popular flowers.

Development of roses in Western Europe after 1730

What have we seen so far**?** The range of roses used in important gardens in the Baroque period numbered around 20 to 25, usually bearing descriptive Latin names, e.g. "Rosa alba plena". Around 1750, however, we find nurseries offering 50 garden varieties. In other words, the range had doubled in number.

[13] Elsholtz, Johann Sigismund: Neu angelegter Garten-Baw. Leipzig 1715, p**.** 98
[14] Schwimmers, Johann Michael: Deliciae Physico-Hortenses oder Physikalische Gartenlust. Erfurt 1702, p. 179
[15] Elsholtz, Johann Sigismund: Vom Garten-Baw. Cölln an der Spree 1672, p. 278
[16] Schwimmers, 1702, p. 276
[17] see Grew, Nehemiah: Anatomy of plants. London 1682
[18] see Camerarius, Rudoph Jakob: De sexu plantarum epistola. Tübingen 1694
[19] see Linné, Carl von: Systema Naturae. Amsterdam 1735

England

Even earlier there were here and there gardens in Germany in which roses played a role. Possibly there were also those which played on the double meaning of the word "rosarium" and were laid out in the form of a rosary and used as a garden for religious meditation.[20]
But as the rigidly ordered Baroque garden ceased to be fashionable – a trend that started in England – and the more natural "English landscape garden" became all the rage, a change occurred also in the plants used. Rose gardens or "rosaries" first became popular in England around 1740.[21] Since the number of garden roses was relative small, a careful watch was kept for sports and rose seeds were sown.

The foreman of the Botanic garden at Chelsea near London, Philip Miller (1691-1771), found out that insects transferred pollen dust from flower to flower. Miller was not only one of the most famous garden authors of his century, but also a rose lover. In the various editions of his book *Gardeners Dictionary* he was an early promoter of rose sowing, describing in 1768 a Velvet Rose, ´Velvet Royal´ or ´Holoserica Regalis´. He derived it from the seed of the pale Provence Rose.
So it is not surprising that we read of other similar successes.
In 1770 Richard Weston listed 79 roses[22] including several Burnet Roses which were very popular in his country; in 1799 Mary Lawrance painted 90 roses for her book „ A Collection of Roses"[23].

The Netherlands

The only rose breeder in the Netherlands who Gerrit Kleis in his well researched book *Rozenteelt in Nederland* is able to describe with any precision is Cornelis Stegerhoek. He owned one of the biggest firms engaged in the production of rose petals in Noordwijk. Evidently, in 1789 Stegerhoek was able to present Prince Willem V with four rose varieties. One of these was named in Dutch after the Prince. [24]

Around 1788 the first Dutch catalogues appeared in Haarlem, listing a range of 90 roses. The gardeners Jean Kreps[**25**] and Gottfried Voorhelm[26] offered some of their roses with made-up French names. That was new for roses! Voorhelm moreover sold his range to the French gardener François[27] from Paris.
It seems the Dutch gardeners liked to baptise roses with novel names. It is possible they also received new roses without name-tags. This, however, led to such confusion that a buyer could order three or four different varieties only to find they were all the same. Some nurseries, therefore, returned to the practice of identifying their roses by means of Latin descriptions. [28]

---

[20] see Passau, Donatum von: Rosetum dolorosum centifoliatum: Schmerzhafter Rosen=Gart von hundertblättrigen Rosen. Passau 1694
[21] see Laird, Mark: The Flowering of the Landscape Garden. Philadelphia 1999, p. 200
[22] Weston, Richard: Botanicus universalis et hortulanus. London 1770, p. 252-255
[23] see Lawrance, Mary: A Collection of Roses. London 1799
[24] see Kleis, Gerrit: Rozenteelt in Nederland. MS´t Goy-Houten 2007, p. 48
[25] Kreps, Jean: Catalogue des plus belles Plantes. Haarlem 1790
[26] Voorhelm Schneevoogt: Catalogus of Dutch Flower Roots. Haarlem 1792
[27] François: Catalogue des Principaux Arbres, Arbrisseaux, Arbustes. Paris 1790 (Bibliothèque nationale de France)
[28] see Böhm-Krutzinna, Anita: Gartenrosen und Rosengärtner in Deutschland und Westeuropa in der zweiten Hälfte des 18. Jahrhunderts. in: Zandera 32 (2017), Nr. 2

Around 1797 **Cornelis de Graaff** of Lisse published his „Catalogue des Arbres Rosiers“[29], which was probably the first catalogue to offer solely roses**.**
Some of the roses bearing French names in this catalogues are, however, varieties that were bred by the German head gardener Schwarzkopf, whose career we shall examine below. Examples are: ´Majestueuse´, ´Soleil Brillant´, ´Perle d´Orient´, ´Pourpre Agreable´, ´Grande Couronne´, ´Le Glorieux´, ´Lustre Eglise´, etc. [30]

Germany/Hesse

Daniel August Schwarzkopf

According to the latest research, there is no evidence of systematic rose breeding in either France or Italy[31] before 1795.

Therefore, we can say that Europe´s first “real” rose breeder, raising many new varieties, was **Daniel August Schwarzkopf** [32] (1737-1817).
His father was head gardener to the von Veltheim family in East Germany. Thanks to the patronage of this family the young Schwarzkopf was able to frequent a very good school, where he learned several languages as well as basic botanical principles.
He received his practical training as a gardener from his father and uncle. He undertook placements in various important gardens not only in Germany but in the Netherlands and England, not least under Philip Miller at the Chelsea Botanic Garden in London.

In 1766 Schwarzkopf was hired as head gardener by Landgrave Friedrich II of Hesse-Kassel. In the pleasure garden of Weißenstein near Kassel Schwarzkopf established a nursery that specialized in raising North American trees and shrubs.
He was also responsible for the planning and reorganisation of various noble parks and gardens. Schwarzkopf was renown for his innovative methods of work. He was therefore promoted to the position of inspector of the royal gardens in 1790. [33]
Daniel August Schwarzkopf died in Kassel in 1817 at the age of 81.

Schwarzkopf and Roses

At Weißenstein the park included a rose garden. It must have been wonderful to amble through that garden in June.
In 1773 Schwarzkopf started his breeding activity using these roses. Moreover, he did not limit himself to a single class of roses, sowing the seeds of many different species and varieties found in the park. Of the roses he produced, particularly well-known were his Rubiginosa-hybrids, but there were also many Gallicas, Albas and Damask Roses – even some Centifolia varieties.
As early as 1777 Kassel boasted 100 rose varieties[34], about 40 more than was usual in German gardens.

---

[29]De Graaff, Cornelis und Jan: Catalogue des Arbres Rosiers. Lisse, Niederlande um 1797 (Bibliotheek Koninklijke Algemeene Vereeniging voor Bloembollencultur Hillegom)
[30] see Böhm-Krutzinna, Anita: Unter den Rosen. Norderstedt 2015
[31] see Hornung, Andrew: Le Rose italiane. Pendragon 2015
[32] see Böhm-Krutzinna 2015
[33] see Staatsarchiv Marburg: Bestand 53f Nr. 582
[34] see Böttger, Christoph Henrich: Verzeichnis derjenigen Bäume und Sträucher. Kassel 1777

Schönbusch near Aschaffenburg

A young gardener with close ties to Kassel was **Christian Franz Bode** (1751/52-1826), the head gardener at the landscape park at Schönbusch near Aschaffenburg from 1783. Schönbusch was a part of the summer residence of the Elector and archbishop of Mainz, Friedrich Carl von Erthal.
We know that Bode arrived here from Kassel in 1781, and it is thought that he brought with him roses or cuttings. In any event, he was given the task to buying plants in Kassel-Weißenstein/Wilhelmshöhe, and his journeys and the letters between him and Schwarzkopf are proof of the collaboration between these two head gardeners. [35]

The 104 rose varieties listed in the Schönbusch plant inventory represent roughly the number of varieties in Kassel in 1777. The roses in the „new assortment" mentioned in the Schönbusch inventory include varieties that clearly had the Weißenstein pleasure garden as their source and must be considered Schwarzkopf-bred roses.
Examples of these are:
´Pourpre de Weissenstein´, ´Ornement de Weissenstein´, ´Aimable de Weissenstein´, *Rosa damascena* ´Papaverina Minor´, ´Surpasse Singleton´, ´Ma Favorite´, ´Triomphe´, ´Mignonne´ or *Rosa centifolia* ´Regina´.
It is probable that most of the other roses in the "new assortment" of the Schönbusch garden are roses bred by Schwarzkopf, especially if these do not appear in any earlier catalogues.
Examples include:
´Agreable´, *Rosa alba* ´La Respectable´, ´Jolie´, ´Gracieuse´, ´Violette Nouvelle´, ´Coeur Tendre´, ´Flamboyante´, ´Feu Amoureux´, ´Beauté Tendre´, ´Illustre Beauté´, ´De Parade´, ´Passe la Reine´, *Rosa gallica* ´Incomparable´, ´Belle Parade´, ´Soleil Brillant´, ´Belle sans Flatterie´, ´Manteau Pourpre´, ´Aimable Rouge´, etc.
Some of these roses were so beautiful that they are to be found still today in gardens and rose collections.
<u>This list is extremely important because there is no complete index of the roses growing in Kassel´s Weißenstein park around 1785.</u>

Weißenstein/Kassel

Indeed, Conrad Moench (1744-1805), Professor of Botany in Kassel, issued a commercial catalogue of plants in the Weißenstein nursery in 1785 which reported that there were 150 rose varieties available. But he described only a few of the new roses. In particular, he mentions seedlings of the so-called *Rosa belgica*: ´Polyanthos´, ´Ma Favorite´, ´Pyramidalis´, ´Papaverina Minor´, ´Ma Mignonne´, besides the Centifolia ´Regina´, the Gallica ´Papaverina Major´ and the ´Calycina´.[36]
Some of these varieties, however, are strangely not listed in the nursery´s 1805 catalogue, which offered only 77 varieties, one of which, ´Perle de Weissenstein´, can still be found in the park. [37]

[35] Albert, Jost: Ein Pflanzenverzeichnis für den Landschaftsgarten Schönbusch aus dem Jahr 1783, in: Zandera 25 (2010), Nr. 2, p. 76
[36] Moench, Conrad: Verzeichnis ausländischer Bäume und Sträucher des Lustschlosses Weißenstein bey Cassel. Frankfurt/Main, Leipzig 1785, S. 111 ff. (Bayerische Staatsbibliothek)
[37] Sennholz: Verzeichnis derer Bäume und Sträucher die in der Baumschule zu Wilhelmshöhe verkauft werden. Kassel um 1805, p. 10 ff. (ULB Sachsen-Anhalt)

So why was there such a drastic reduction in the number of rose varieties grown in Kassel?

Soon after the publication of the Weißenstein nursery´s catalogue, Landgrave Friedrich II died in autumn 1785. Shortly thereafter his son and heir Landgrave Wilhelm IX ordered the pleasure gardens to be transformed into a landscape garden. From 1798 onward the park was called "Wilhelmshöhe".
As head gardener Schwarzkopf was responsible not only for the usual tasks associated with this position but he now had a new longterm responsibility for overseeing and planning the new park plantings, for earthworks and the building of paths.

In all likelihood the gardener´s overburdening is what accounts for why some of the more delicate varieties were lost. Besides, Schwarzkopf also had a personal motive to pare down the list by eliminating some "sister roses" derived from the same crosses. Indeed, Professor Moench had undiplomatically remarked in the 1785 commercial catalogue that a part of the rose varieties were remarkably similar.[38]
This was tantamount to labelling Schwarzkopf a braggart, indeed a conman! Perhaps this is one of the reasons why Schwarzkopf never wrote in detail about his roses.

Some indication of what these roses were can be found in the paintings of Salomon Pinhas, official artist to the court at Kassel. The 133 water colours he painted show species and varieties of roses that could be found in Kassel before 1806.
Moreover, Salomon Pinhas, who was a miniaturist, amazingly hid – not only on the title page but in the rose paintings themselves – countless tiny portraits of his contemporaries that are only visible with a magnifying glass![39]

But let us return to rose breeding:

Were roses bred by artificial pollination before 1800?

Knowledge of this method of breeding was widespread in Germany at this time and was widely practised to obtain florists´ flowers. [40]
Not surprisingly there were religious and ethically motivated objections to such a procedure and several breeders therefore shrank back from describing their work too precisely.
Pious christians were horrified at the idea that breeders might want to imitate God or improve on his creation. And they were not alone: the botanist Siegesbeck, Wolfgang von Goethe or the philosopher Hegel are examples of people who criticised the sexual theory of plant structure, finding it squalid suddenly to pronounce plants they had hithero considered "pure" now to be thoroughly polygamous and thus indecent. They found it repulsive to think of male and female sexual organs located close together in a bloom – and pollination of flowers reminded them of the sexual act between humans.

There were, however, enthusiastic flower lovers who, from 1765, did write about their breeding attempts using artificial pollination. Their passion for collecting florist´s flowers was like an addiction and their favourite flowers were hyacinths, carnations, auriculas, stocks or ranunculus.

[38] Moench 1785, p. 124
[39] see Böhm-Krutzinna 2015
[40] see, for example: Lueder, Franz Hermann Heinrich: Fortsetzung der in den Briefen über die Bestellung eines Küchengartens gegebenen Anleitung. Hannover 1776, p. 244;
Hirschfeld, C. C. L.: Gartenkalender 1782. Kiel 1782, p. 190 ff.

One of these was the Pastor Franz Hermann Lueder (1734-1791/92). Before 1768 he carried out crosses with strawberries, melons, spinach, stocks and above all carnations. [41]

Many of these aspects that are worth taking seriously were certainly known to Schwarzkopf as he began to breed roses in 1773. Since childhood he had had to present himself to his various patrons as a person of impeccable behaviour. So it would in any case have been safer for an ambitious head gardener to avoid exposing himself to any criticism and just talk of sowing the seeds of rose hips.
Naturally sowing followed by selection was also a good way of obtaining useful or beautiful plants.
But it can´t have taken long for Schwarzkopf to have come into contact with the idea of plant sexuality and artificial pollination in discussions with his colleagues and teachers.
The artificial pollination of roses would have been very easy for him. He would just have had to cut off the filaments of a rose bloom and brush the pollen of another rose onto the stigma of the mother flower. The pollinated bloom then needed only to be protected from further pollination attempts by insects. This would have been simple if the rose was in a pot and placed in a greenhouse or indoors for isolation.

Ludwig Julius Höpfner and other German rose breeders

A typical example of a breeder of those times, who was clear about the rejection of artificial pollination, was the lawyer and Tribunalrat **Ludwig Julius Höpfner** (1743 – 1797) of Darmstadt.
He was a friend of Goethe´s and described by his colleagues as amiable, intelligent and hard-working. A man of many interests, he read widely, was an accomplished turner and collected almost all the roses then in commerce. [42]
Since no one knew which were rose varieties, which were hybrids or species, Professor Höpfner sowed their seeds. He also crossed species.

So as to avoid giving cause for criticism, he did not pollinate the mother plants by hand but planted two suitable rose bushes close together and then removed the stigma from, for example, *Rose foetida* – something that was not actually necessary.
Using a Pimpernell Rose as a mother plant, he pinched off the stamens to prevent self-pollination and then tied the blooms of *Rosa foetida* onto those of *Rosa pimpinellifolia.*

By the way, cutting off a rose bloom and then tying it onto another in order to induce pollination, was one of the breeding methods of the Catalan rose breeder, Pedro Dot.
The hybrid resulting from the foregoing example, "*Rosa pimpinellifolia* Linn. x *R. clorophylla Ehrh."* was in all its aspects halfway between its two parents, the flower was yellow blended with pink. [43]
Evidently Höpfner succeeded in his crosses, creating considerable excitement in his day. Unfortunately Höpfner was not able to evaluate his experiments as he fell seriously ill and died a few years later. It is doubtful that any of his roses were ever in commerce.

[41] see Lueder, Franz Hermann Heinrich: Fortsetzung der in den Briefen über die Bestellung eines Küchengartens gegebenen Anleitung. Hannover 1776, p. 244 und: Briefe über die Bestellung eines Küchengartens. 1. Teil, 3. Aufl. Hannover 1778, p. 260
[42] Wenck, Bernhardt: Höpfners Leben. Frankfurt/Main 1797, p. 76
[43] Borkhausen, Moritz Balthasar: Botanisches Wörterbuch der Botanick, 2. Bd., Gießen 1797, p. 143

But new rose varieties were bred not only in Hesse but in Eastern Germany around 1800. In his gardener´s catalogue of 1804, the merchant **Johann Carl Corthum** offered the rose ´Schöne Zerbster´, described as "*very bright red, a colour found in no others. It beers beautiful wellfilled blooms,[...]they grow to a height of 2 to 6 feet*."[44]

The first German rose breeder to admit to the artificial pollination of roses was **Dr. Bernhard Stiehler** of Dresden. His breeding activity began in 1815. In a short article in the *Allgemeine Deutsche Gartenzeitung* in 1827 he informed readers of his successes and experiences in rose breeding. He had already come to recognize that in most garden roses it was necessary to remove the stamens before the flower opens its petals to prevent self-pollination. [45]

Let me sum up briefly:
In the Baroque period garden roses, usually imported, were certainly much valued in Germany as they had been since the Middle Ages, but there was a relatively narrow range since they were rarely used for breeding. Only when the English landscape garden became fashionable were new rose varieties produced – above all in England after 1740. Starting in 1773 the German head gardener Daniel August Schwarzkopf also bred a wider range of roses, some of which were given French names.
The inclusion of these new roses by Dutch gardeners in their international sales catalogues initiated a new enthusiasm for roses, which was to lead to the rose becoming one of the most loved of all flowers.[46]

Translation: Andrew Hornung

[44] Corthum, Johann Carl: Catalogus von Bäumen und Sträuchern. Zerbst 1804. p. 74
[45] Stiehler, Bernhard: in: Allgemeine deutsche Gartenzeitung Bd. 14. Regensburg 1827, p. 382