

[Excerpt from a lecture given at the 39th Annual Meeting of the Working Group Orangerie in Burghausen]

During our research on the history of the Bizzarria we came across Naples and the article "Citrus from Naples" by Dietger Hagner at the 29th Annual Meeting of our Working Group (2008). There were reported on the royal Neapolitan garden director Friedrich Dehnhardt and his activities in connection with the planting of the winter garden at the Munich Residenz. In his work Hagner also dealt with other aspects of Dehnhardt's horticultural life. Among other things, he referred to an announcement by Dehnhardt to write a monograph on the citrus collection in the gardens of Francesco Ricciardi, Conte di Camaldoli. Dietger Hagner suspected that parts of the manuscript and some drawings might still be preserved.

Of course we were interested in this monograph and we decided to search for the material that might still be available. We started with the sources mentioned by Hagner.

The first indication that Dehnhardt intended to write a monograph on citrus plants can be found in the preface to his *Catalogus Plantarum Horti Camaldulensis*, published in 1829. There he announced that "with much zeal and work he will try to create a monograph of the genus Citrus with more than 125 drawings of different species and varieties". In the second edition of this plant catalogue of 1832, an increase to more than 170 different citrus plants was reported and an early publication of the monograph was promised.

At the end of 1836 Dehnhardt had his friend Christian Friedrich Bellermand send a letter to the *Verein zur Beförderung des Gartenbaus in den Königlich Preußischen Staaten* (Association for the Promotion of Horticulture in the Royal Prussian States) in which he announced the publication of a monograph on citrus plants and specified the content and scope of the planned publication. It should then contain 160 colour illustrations of various fruits. Each individual species and variety would be described in several languages and supplemented by information on use, culture and reproduction. Dehnhardt asked the association for support - as they say - "to subscribe to the publication to be held in Germany and probably in Berlin". He had enclosed 3 test drawings and a plant list.

A short time later, the association's writings contained a communication promising support for the publication. However, the board of the association made some conditions: the price should not be too high, the publication should take place in individual deliveries, one wanted to influence the equipment of the work and negotiate with the author about a suitable announcement in the newspapers.

Whether these negotiations took place and how they proceeded is not known. In later communications of the association there were no more references to the monograph. Dehnhardt's contributions after 1836 concerned other topics.

When Friedrich Dehnhardt announced the Citrus Monograph to the Association for the Promotion of Horticulture, he was 49 years old and had been living in Naples for 25 years.

Dehnhardt was born in 1787 near Göttingen as the son of a barber surgeon. He studied with Heinrich Adolf Schrader in Göttingen and received a botanical education there. He worked as a gardener and garden inspector in Kassel, Schönbrunn, Milan and Monza until, at the age of 24, he was employed as a senior gardener and garden inspector in Naples, following the express intercession of the director of the botanical garden. In the following years, Dehnhardt in Naples developed a variety of gardening

activities. After being appointed Inspector of the Gardens of the City of Naples in 1814, he was instrumental in the design of various public parks and garden landscapes in the region. He also worked as a garden and landscape designer for private clients in Naples, such as Count Camaldoli, whose gardens he made one of the most famous and significant in southern Italy and whose citrus collection he wanted to use for the illustrations in his monograph.

Dehnhardt was an excellent botanical draughtsman. Several illustrations of the "Flora Napolitana" by Michele Tenore were made by him. Many of his plant drawings can still be found today in the Botanical Garden of Naples.

At the beginning of the 19th century, various illustrated works on citrus plants were published in France. The standard work of the 19th century for citrus culture, the monograph *Histoire Naturelle des Oranges de Risso and Poiteau* of 1818 contained 169 different citrus species and varieties with 57 coloured illustrations of various fruits. Citrus fruits were also depicted in some pomological publications. The drawings were made by important plant painters of the time, such as Poiteau, Turpin and Bessa.

Dietger Hagener rightly pointed out in his contribution that the publication on citrus plants announced by Dehnhardt with its more than 180 illustrations would probably have achieved a similar significance as the work by Risso and Poiteau.

It is well known that Friedrich Dehnhardt's citrus monograph never appeared. After 1836 there was also no further announcement of such a publication. In addition to other botanical and horticultural fields of activity, he has repeatedly dealt with citrus plants and also worked on the completion of his monograph.

Dehnhardt died in 1870 at the age of 82. Already 10 years before his son, Alfredo Dehnhardt, had taken over the office of the garden inspector at the Botanical Garden from his father. Plant drawings of him are also still available in the archive of the Botanical Garden of Naples. In 1876, the journal *Gartenflora* published a brief note to the effect that Alfredo Dehnhardt was busy with a "great monograph on citrus trees". As we now know, he planned to publish a selection of his father's drawings with slightly altered texts. This publication was never published either. His early death in 1882 was probably one of the causes.

The existence of a manuscript and coloured drawings by Friedrich Dehnhardt was last mentioned in 1911 in a publication of the Botanical Garden of Naples. Dietger Hagener suspected that there might still be traces of Dehnhardt's monograph in the archive. We therefore began our research in the Botanical Garden of Naples. With the kind support of the director, Prof. Paolo Caputo and his assistant Dr. Giancarlo Sibilio, we were able to view the collection of plant drawings from this period in the archive. It consists of 2 large archive folders in folio format, each with about 200 botanical watercolour drawings of various plants and fruits. Among them are also numerous from Dehnhardt's hand and provided with his signature, unfortunately none with citrus fruits. We found no trace of his manuscript either. However, we were informed that descendants of Friedrich Dehnhardt were still living in Naples and that they might be able to give more detailed information about the whereabouts of his estate. However, this search turned out to be difficult and was initially unsuccessful.

Another trace that Hagener had already followed in vain were the tree test drawings sent to Berlin by Dehnhardt in 1836. We didn't find these drawings either. However, we came across a request from Naples in connection with a doctoral thesis. Archive material on Friedrich Dehnhardt and his relationship to the *Verein zur Beförderung des Gartenbaus in den Preußischen Staaten* was sought there.

Access personal data and other articles from the sender via the University of Naples science portal. We came to the conclusion that he had intensively occupied himself with the life and work of Friedrich Dehnhardt in Naples and that he might also have information about the citrus monograph. Therefore we used another stay in Naples to establish the personal contact. This finally solved the mystery about the whereabouts of the manuscript and the drawings by Friedrich Dehnhardt.

Friedrich Dehnhardt completed his monograph during his lifetime.

The manuscript entitled "TRATTATO DEL GENERE CITRUS" has been preserved in its entirety and is privately owned. This also applies to the associated botanical drawings. These are more than 180 coloured watercolour drawings of citrus fruits.

The monograph offers a comprehensive overview of citrus plants cultivated in southern Italy in the first half of the 19th century. The first part of the text deals with the geographical origin of various citrus species. The climatic conditions in their home countries are regarded as decisive for the possibility of their successful cultivation in southern Italy. Already here it becomes clear that Dehnhardt's monograph is primarily concerned with the agricultural and horticultural use of citrus plants. Thus Dehnhardt saw his monograph mainly as a useful and descriptive guide for producers and growers of citrus fruits, but also as a source of information for citrus plant lovers.

In the main section, Dehnhardt describes over 220 different citrus species, variations, hybrids and varieties, most of which are represented by images of their fruits and leaves.

The systematics used by him in the process distinguish only between oranges and lemons. Dehnhardt divides the oranges into 5 sections, each with one or more sections. Division 1 contains 46 sweet orange varieties (including 7 blood oranges) and Division 2 29 bitter oranges. Especially interesting for us were 6 different bizzarrias. Division 4 lists 2 varieties of mandarin and Division 5 16 different grapefruits. He describes a total of 98 orange species, varieties and varieties.

The structure of lemons is simpler, there is no differentiation according to sections. Remarkable here are the no less than 67 limes, 12 sweet lemons and 25 different ponzines.

The description of the 225 different citrus plants is based on a uniform scheme which Dehnhardt had already announced in 1836 in his letter to the *Verein zur Beförderung des Gartenbaus*. In addition to the Latin name of the respective variety, its colloquial name is mentioned in Italian, French and German.

The following is a phenotypic description of the overall appearance of the tree, its leaves and fruits. In the case of the leaves, only the shape is usually considered. The fruits are described in more detail by the shape, size, colour, taste, smell, consistency and texture of the skin, albedo, flesh and seeds. The following are notes on the use of the fruit, information on special requirements for cultivation and often an example of the location of the tree described.

The botanical drawing belonging to the respective variety contains the Latin, sometimes also the Italian name, the signature of Dehnhardt and partly the year of its origin in handwriting.

The third part of the monograph is entitled: REFLEXIONS ON THE CULTURE OF AGRUMS and contains instructions and hints for a successful cultivation of citrus plants in southern Italy. Concrete topics include the importance of soil, water and air as well as various ways to improve their quality, the fight against pests and diseases, advice on proper pruning, guidelines for planting plantations and procedures for propagating citrus plants.

For example, Dehnhardt writes on the breeding of new varieties of citrus fruits from seeds:

*Even the most capable could be undecided if they had to wait 15 or 20 years to see the fruits. It's really only understandable when such a long wait is discouraging. It is necessary to have a passionate love for this noble family of plants, and it is also necessary to be guided by philanthropic feelings for the benefit of future generations in order to do a laborious job that can lead to happy results.*

*I felt this courage in me. I was inspired by the above principles and have done such a job! After 30 years of waiting, I finally had the comfort of seeing my seedlings blossom and bear fruit. I discovered some great new varieties among them, which appear systematized and classified in large numbers in this monograph - a very satisfying reward for my efforts!*

Almost prophetically he then continues:

*Should it happen that I am not rewarded justly or not at all for this, I will pass this work on to my children; they will perhaps confirm the importance of this work better than I do.*

Today's lecture was the first to publicly inform about the contents of Friedrich Dehnhardt's manuscript and drawings as well as a later publication. This would not only fulfil the legacy of the author and his son after more than one and a half centuries, but would also publish a historically valuable work on the development of commercial citrus culture in southern Italy. The illustrations of citrus plants in it are certainly among the most important of the 19th century.

Thank you for your attention.