GERMAN BOTANISTS AND NATURALISTS ON THE RIVIERA BETWEEN THE END OF THE 19TH CENTURY AND THE FIRST HALF OF THE 20TH. THE ORIGINS OF THE INDUSTRIAL FLORICULTURE.

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ABSTRACT

The author reviews the many German botanists, nurserymen and growers who conducted their activities in the Riviera di Ponente, contributing to the development of the region.

KEY WORDS

German culture, botany, floriculture, Riviera

INTRODUCTION

Between the middle of the 19th century and the first half of the 20th century the most western part of Liguria, better known as the Ponente Ligure or the Riviera dei Fiori, was considered as a coveted destination for botanists, naturalists and garden lovers. This extraordinary moment was characterized by the creation of wonderful public and private acclimatization gardens, nurseries, the first horticultural businesses and a rich botanical literature. When we mention the botanists on the Riviera we don't refer only to the sporadic presence of some great scientists or to their excursions, but also to all those gardeners, growers, naturalists and more generally to all those people who have thoroughly described the local flora, to the famous personalities and other less known people who have stayed on the Riviera to study its plants, to make experiments about their acclimatization and at the same time to create extraordinary botanical collections. In this pioneering context the Germans have played a prominent role, which cannot be restricted to some sporadic appearances or to some short scientific trips (Carassale et al., 2016). The presence of the German community on the Riviera has been well

described by Koerner (1892). Among the Germans we can number famous personalities and other less known people who have left their permanent marks in the landscape and on the local economy, thanks to their experience and excellent intuitions. Unlike other Italian regions, during this period the western Liguria didn't progressively industrialize itself, but it "modernized" itself through a hotel and tourist development, while the agricultural economy was based on the floriculture (Napolitano, 2011). This new kind of economy became international, thanks to the start-up of the railway line between Genoa and Ventimiglia, which connected Liguria with France and the rest of Europe. The railway connections have also created real strangers' colonies, which were livened up mainly by English, Germans, Russians and Poles. The people who could be seen on the Riviera usually belonged both to the European nobility and the upper middle-classes, who chose the Riviera not only as a winter holiday resort, but also as a health resort. In order to better understand the spirit of this place and the feelings of the eminent hosts, we can refer to M. Philippson's writings, who was the biographer of Frederick William III, Crown Prince of the Kingdom of Prussia and German Emperor, from the Villa Zirio (Guglielmi Manzoni, 2015), the Emperor's residence in Sanremo: "the façade looks onto a magnificent garden, rich in exotic plants, which glimmers thanks to the blue brightness of the Mediterranean" (Philippson, 1908). The author, Von Martin Philippson (1846-1916), historian professor at the Université libre de Bruxelles and at the University of Bonn, has undoubtedly caught the main elements which have spread the myth of the Riviera among the German-speaking populations, to whose community belonged several botanists and gardeners that have stayed, lived and laid out gardens and launched important entrepreneurial activities. Hörstel (1902) wrote in his famous guide Die Riviera: "the Riviera di Ponente is the most beautiful Italian region and Sanremo can be defined as the most German of the Italian towns".

LUDWIG WINTER

Although the English community of that time included also patrons such as Sir Thomas Hanbury and naturalists such as Clarence Bicknell, a great contribution to the botanic studies, to the gardens' creation and to the horticultural development has been made by enthusiasts and erudite Germans. In this regard, the same Sir Thomas Hanbury chose a young German, Ludwig Winter, in order to create his gardens in La Mortola, and hired several expert German botanists as curators. In order to analyze the reasons why an English man hired German botanists as curators and to understand why their presence has been so important for the horticultural development of the most western part of Liguria, we have to think about the cultural background of the German world of that time. Those distinguished botanists, gardeners and aspiring nurserymen were undoubtedly attracted by the charm of the Riviera, by its climate and by the possibility to cultivate new plants, but they weren't unprepared adventurers. They all had both a solid botanical and horticultural formation, which they had acquired by having studied in renowned gardening schools and by attending botanic gardens with greenhouses, which were rich in collections of exotic plants. The plants' exhibitions, which were common in Germany, are an evidence of the horticultural knowledge of that time. The Germans brought with them also a rich cultural heritage on the Riviera, among which the agronomic and technological innovations which were at the root of the reconversion from the olive growing to the industrial floriculture. The spread of this new kind of floriculture is considered as an answer to a new trend which began to spread and to expand more and more in Europe. In order to better understand the size and the expectations of that time towards the flower market, it's worth recalling a quote of Mario Calvino: "Flowers have become a real need for kind people. Every noble lounge in Petersburg, Berlin or London is decorated with flowers from our Riviera". However it's the German Ludwig Winter, who was an esteemed landscape architect, nurseryman, flower grower and gardener, who is considered the

pioneer of the industrial floriculture on the Riviera. Born in 1846 in Heidelberg, Germany, since he was young he showed a great interest both for the botany and the gardening, but also a forward-looking spirit, a desire for changings, a leaning for travels and an openness to experimentation. His enthusiasm and his passion for botany pushed him to widen his knowledge and to seek new ambitions, but in the Europe of that time winds of war were blowing. The political tensions between France and Prussia pushed him on the Côte d'Azur, in Charles Huber's renowned horticultural business near Hyères. In that same period, near the border between Italy and France, Thomas Hanbury was making his dream of creating a great acclimatization garden in La Mortola come true. For this purpose, the English patron availed himself also of Charles Huber's suggestions. Among the other things, Charles Huber suggested Thomas Hanbury to hire the talented Ludwig Winter. The young German gratefully accepted the work and devoted himself to this ambitious project with great passion. Soon his enthusiasm, his determination and his hard work made him gain the Hanburys' trust, which will never fail, despite the subsequent events. All the collections of young plants coming from all over the world found their suitable place in the garden's great project, which followed a modern arrangement which was based both on the landscape and the biogeography. In 1874 the garden was almost completed and Ludwig Winter moved to the near town of Bordighera, where he started a new activity of his own, as a nurseryman and a flower grower. The experience he acquired in La Mortola would prove itself decisive for his new activity.

He created a cut flower cultivation of mimosas in *Curtasse*, one of Bordighera's town districts, and he launched on the market some cultivars he had obtained by hybridizing different species such as *Acacia hanburyana* (*dealbata* x *podaliriifolia*), which usually bloomed between January and February, and other cultivars such as *siebertiana* and *deneufvillei* (Stacchini, 1926). In the same period he began to grow both the *Safrano* and *Marie Van Houtte* roses as cut flower roses. That's how the

floriculture began. In 1875 he produced and sold a lot of tropical plants in his "nursery-garden" in the "Vallone del Sasso", but it's in "Madonna della Ruota", another town district of Bordighera, that Ludwig Winter created his landscape masterpiece, a wonderful place ("Everything is beautiful in that garden: its regular lines, its harmonious curves, its monumental arbours, its wide panoramic views above the sea"). Ludwig Winter was not only a pioneer of the floriculture, but also a capable entrepreneur who, like the art, knew how to be ahead of his time and to foresee the new market strategies: "Our horticulture has to produce plants not only for trade, but also to pleasure the senses. It's the voice of the beauty of Nature that we have to bring in Man's house by means of our plants". Ludwig Winter's entrepreneurial spirit was extraordinary and revealed itself also in the brilliant idea of bringing in the Modern Art some of his products, which he manufactured by interweaving some parts and leaves of palm. He also marketed the big palms, above all Phoenix dactylifera, which were meant for the villas and the boulevards of the coast towns of both the Italian and French Rivieras. The sale of great specimens allowed him to improvise some "developed" gardens, offering to the clients what we define nowadays as "ready effect". At the beginning Ludwig Winter sent his goods by train. Also his detailed catalogues (Fig. 1), which listed the plants according to the species they belonged to, their size and their price, and reported also a short description and some useful information about their culture, can be considered as another example of promotional instrument ahead of Ludwig Winter's time. As a German, he is very scrupulous about commercial details. But all the plants were exposed and grouped together in the nursery not only according to their scientific name and their size, but also to their color, their growth and their growing needs. In this way Ludwig Winter was not only a nurseryman, but he became also a landscape architect and an artist who, by means of his horticultural compositions, stimulated the client's imagination but at the same time he respected the plants' growing needs.

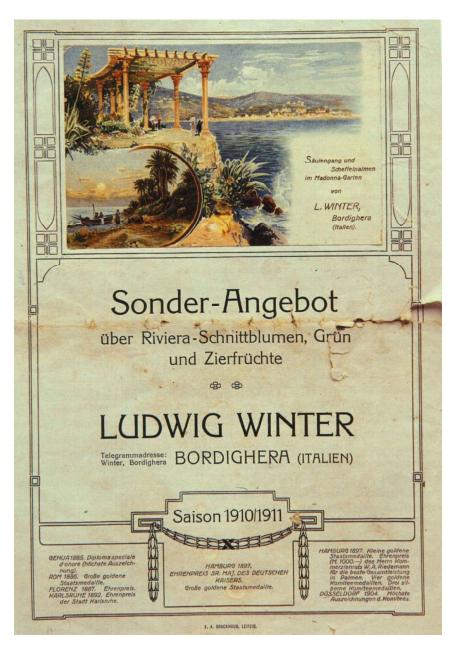


Fig.1. The front cover of the catalogue of the L. Winter's nursery in Bordighera.

Then the same nurseries began to sell also the small potted plants which were meant for the interior decoration and as garden products. These were the first steps of the flower-growing industry, which would grow extraordinarily in the subsequent years, also thanks to the passion of some local growers. "This infectious example will be followed by many imitators. So the actual Ligurian flower-growing industry was born..." (Rovesti, 1924). Many of the most prestigious horticultural businesses of western Liguria were started up by men who had grown up and worked with Ludwig Winter and had become entrepreneurs who knew how to put to practical use the teachings of a great master. It's worth mentioning the succulents producing firms started up by Bartolomeo Pallanca, Antonio Ronco, Giovanni Allavena and Giacomo Molinari. Also Ludwig Winter's great respect for Nature and far-sightedness about the sustainable exploitation of the natural resources are always remembered with pleasure. Beyond every description, it's worth recalling the words which were reported in the poster which was published during the first "Fiera del Fiore" in Bordighera in 1895. In this poster he alerted Bordighera's citizens against the danger to neglect their lands for a prevailing tourist exploitation of the territory: surely a far-sighted call to defend their natural heritage and the Riviera's landscape. Several years would pass after Ludwig Winter left Thomas Hanbury before the arrival of another just as valuable curator in La Mortola. It's worth remembering that another German, Otto Zacharias, worked in the garden for a short period, but unsuccessfully.

CRONEMEYER, PENZIG AND DINTER

Thomas Hanbury's respect for German-speaking botanists was confirmed again with the hiring of Gustav Cronemeyer as curator of his gardens. This choice was rewarded and, under Gustav Cronemeyer's guide, the scientific aspects of the garden became more and more important, thanks both to the intense correspondence and to the exchange of seeds with other botanical gardens. The typical German precision of

the new curator can be seen in the compilation of the seeds' catalogue, which became also a valuable instrument of scientific communication. With his arrival, La Mortola could be considered as a real botanical garden. Thanks to the publication *Systematic Catalogue of Plants growing in the open air in the Garden* (1889), botanists from all over the world learned of the garden of La Mortola and began to attend it.

Thomas dedicated much of his time to the scientific aspects of the garden and loved to make friends with the most known botanists of the time. Among the visitors of the Hanbury gardens, one the most loyals is another eminent German botanist, Albert Julius Otto Penzig. Born in Samitz (Prussian Silesia), he soon showed a great love for Italy and ended up spending most of his life in Liguria where he holded the important office of director of the botanical Garden of the University of Genoa between 1887 and 1929. Otto Penzig, like many of his contemporaries who lived in the humid and cold regions of northern Europe, came on the Riviera for health reasons. We mustn't forget that Sanremo belonged to the élite European resorts which were recommended in Germany for the treatment of tuberculosis (Napolitano, 2011). The medical prescription to spend winter in a place with an healthy climate brought Otto Penzig to Menton. Penzig attended assiduously La Mortola and worked together with the various scientific curators, whom he helped to identify the new species which had been introduced in the garden and to draft the first editions of the catalogue Hortus Mortolensis. Thanks to his friendship with Thomas Hanbury and to the English patron's sensitivity and generosity, Otto Penzig got the money to finance the construction of the new building of the Botanical Institute of Genoa, which would be inaugurated in 1892 during the prestigious International Botanical Conference. This conference was very successful for the scientific world of the time and ended worthily in La Mortola. Sixty botanists coming from all over the world travelled from Genoa to La Mortola by train and spent a "pleasant afternoon" admiring the garden's wonderful collections. Ottone Penzig can be essentially defined as a great naturalist. During his

stay in Liguria he carried out a valuable botanical research and put together a collection of samples of the local flora; unfortunately the finds and a part of the documents went missing during World War II.

He founded and edited a prestigious scientific journal, Malpighia, which has remained one of the most important Italian botanical publications for a long time. But Ottone Penzig didn't limit himself to his studies. He also took on some great adventures: he became a daring explorer and travelled to Eritrea and Indonesia. Recently an unpublished manuscript written by this great naturalist during an expedition in Indonesia has been found and translated in Italian (Carlini, 2016). This valuable document contains sketches, drawings and notes about his travel and is also an important anthropological record of the Asia towards the end of the 20th century. As the World War I drew near, since he was of German origin, he was forced to leave Genoa. After the end of the war he came back to the University of Genoa and published Flora popolare italiana (Penzig, 1924). This work collects all the dialectal names of the main native plants grown in Italy. It's a very useful book for botanists, because it gives the possibility to relate the popular names of the plants with their scientific names in Latin. The knowledge of the popular names is a fragile heritage and is destined to be lost because Man moves more and more away from Nature and because of the popular traditions and customs. To have an idea of the great research it's worth examining an herbaceous plant which is common in the whole Riviera, Centranthus ruber DC., in order to find out with how many different names this plant is known in Liguria: Basan-a grassa (Genoa); Basan-a sarvaega (Polcevera valley); Erba da vacche (Borzoli, one of Genoa's city districts); Fava grassa (Pegli, one of Genoa's city districts); Erba grassa (Voltri, one of Genoa's city districts); Fava grassa (Pegli); Canna rezza (Arroscia valley); Cannuazu (Cogorno); Canna rossa (Bordighera); Cannerezza (Porto Maurizio); Calin-a grassa (Lavagna); Gioxia (San Bernardo); Courelli (Montalto); Cornacia (Nice); Cornaccia (Sospel). Among the various botanical researches, it's worth mentioning a popular

publication that today would be defined as a tourist publication, entitled Flore coloriée de poche du littoral méditerranéen de Gênes à Barcelone y compris la Corse and published in 1902. Thanks to the images and the description of the species which grow along the coastline, the botanist expresses "the astonishment of the tourists who visit the Riviera for the first time. A natural wonder that travelers take with themselves in their cold northern lands and tell their compatriots about the green grayish mantle of the olive trees that cover the hills, the scented citrus groves, the majestic palms and the huge agaves". This description praised the mild climate which allowed to grow a vast number of very heterogeneous plant species coming from the four continents.

After Gustav Cronemeyer's death, the role of curator of the Hanbury Gardens was entrusted to Kurt Dinter, a German botanist who would stand out at international level. The period of time which he spent at La Mortola would reveal itself as an important stage of his life. The rich collection of South African succulents of the gardens fascinated immediately the young botanist, who was absorbed in preparing the draft of the second catalogue *Alphabetical Catalogue of plants growing in the open air in the garden of Thomas Hanbury* (1897). Kurt Dinter's stay at La Mortola was marked by a series of bad behaviours and dissoluteness that pushed him to leave his job as curator (Berger E., 2016). In 1897 he left the Hanbury gardens and moved to German South West Africa to undertake an adventurous exploration of the region. It's the beginning of a long period of time full of travels and explorations, during which he was always accompanied by his inseparable wife Helena Jutta Schilde.

ALWIN BERGER

After Kurt Dinter left his role, Alwin Berger, a substitute with excellent references, reached La Mortola. Alwin Berger was born in Möschlitz, near Schleiz, in Thuringia. The extraordinary talent he very soon showed pushed his parents to make him continue his studies. This would lead him to move to southern Germany and to enroll at the Pomologisches Institut.

Even if he wanted to have a complete education about fruit growing (Berger E., 2016), he didn't feel satisfied because he had to deal every day only with pomology. Therefore he moved to Ebersdorf where he learned to know and to love the exotic plants which grew in the greenhouses. This passion would subsequently lead him to work and study in prestigious botanical gardens such as those of Dresden and Freiburg. During his stay in Dresden, Alwin Berger met Kurt Dinter, who was about to travel to Italy to look for a job in the garden of La Mortola. The charm of southern Europe encouraged also Alwin Berger to travel to Italy for health reasons and to work in Hillebrand's nursery in Pallanza, on the shores of the Lago Maggiore. In 1897 he was hired in the "Palmengarten" of Frankfurt am Main, but he soon received the appreciated proposal to work in Italy, at La Mortola, because the outgoing curator, Kurt Dinter, needed to be replaced. After an evaluation of Alwin Berger's botanical knowledge, which was entrusted to Prof. Cav. Penzig, Thomas Hanbury found Alwin Berger's references satisfying and hired him as the new curator of his gardens (Berger E., 2016). So Alwin Berger reached the Hanbury botanical Gardens, where he worked from 1897 to 1914 with flying colors. During this period of time he made a valuable contribution to the nomenclature of the succulent plants, in particular of the genera Agave and Cactus. He was responsible for drafting the catalogue, labelling the plants, the correspondence, the herbarium and, besides, the rich library. The period of time that the young Alwin Berger spent on the Riviera was happy and creative. During this time he took several study trips: some of his destinations have been the Botanical Gardens of Naples and Palermo: the latter was particularly renowned for its rich collections of exotic plants. Here he found some rare species of the genus Aloe and described many plants in situ. Subsequently he took cuttings and whole plants to La Mortola. He went also to the Kew Gardens near London, from where he expressed in a letter to Thomas Hanbury "all my joy because I have finally managed to make acquaintance with this Eldorado of all the gardens of the world" (Berger E., 2016). Unfortunately winds of war were about to blow on Europe and dark times were approaching. Since the World War I and all the turbulent political

events that had preceded it were drawing near, Alwin Berger was forced to leave the Riviera under sufferance and to go back to Germany, like many other of his compatriots. His detachment from Italy has been very difficult and left a deep wound both in his mind and in his family's mind. The succulent plants were Alwin Berger's great passion: he brought to the attention of the international scientific community several publications, besides a lot of researches and acclimatization works. Alwin Berger carried out most of his research work during the period of time he spent in Italy. He cured also the drawing up of A systematic revision of the genus Cereus Mill. (Berger, 1905a), Florula mortolensis (Berger, 1905b) and the famous catalogue Hortus mortolensis (Berger, 1912), which listed more than 5,800 native and exotic species. The book included also a sequence of notes about the introduction of the various plants and seeds, including also introduction dates and places of origin. This catalogue is an extraordinary source of information which could be useful to study in depth the botany and the cultivation not only of the native plants of the Riviera but also of the acclimatized ones. During the time Alwin Berger has worked as curator, the garden has been a destination for famous botanists such as the American scholar of cacti J. N. Rose, who came in Europe in 1912 to visit the most important collections of succulent plants. In particular, he inserted many references to the plants he had observed in the Ligurian garden in the monograph of the Cactus family written with Britton (Britton & Rose, 1919-1923). The rich iconography of this work included also some evidence that a plant of Opuntia bergeriana was sent to the New York Botanical Garden in 1906 (Britton & Rose, 1919). The studies of the Agaves, about which Alwin Berger has mentioned specifically the collection of succulent plants of La Mortola in his work Die Agaven (Berger, 1915), are very interesting.

VON HÜTTNER

Among the learned gardeners and the German-speaking patrons who have helped the development of the gardens of the Ligurian Riviera, it's worth remembering the baron Carl Theophil Von Hüttner. We haven't

got much information about this prestigious guest, who stayed in Sanremo between 1874 and 1884, his deathyear, except that he had been ennobled with the title of Baron (Kanceff, 1998). However, we possess a botanical guide of the garden of the Villa Parva (Hüttner, 1884), his dwelling, and the record of some of the plants he described which are still living today, even if in a reduced strip of land of the garden of the ancient dwelling. Even the Baron reached the Riviera because of its mild and healthy climate which was extolled by the press of that time. Moreover, the Baron Carl Von Hüttner was a committed supporter of phytotherapy, i.e. the use of flowers and gardens as a valuable auxiliary treatment method against the depressions (Napolitano, 2011). At that time there were several tourist offers about various destinations along the Mediterranean coasts for people who looked for places of stay along the seashore and warm climates: in this context Carl von Hüttner's decision to build his dwelling in Sanremo was well motivated: "The town and its surroundings stand out from all the other European winter resorts stations and even from the overseas ones (Cairo, Madeira) because of the abundance and the variety of the cultivated plants. Since the number of hosts who show a deep interest for the local gardens is growing year after year, during the last few years our German countrymen have also begun to settle in this wonderful region" (Hüttner, 1884). In his book Gartenflora des klimatischen Winter-Kurorts San Remo, Carl von Hüttner confirmed his great interest for the nature which moved the foreign visitors closer to the Riviera, about which, however, the author reminds us the presence of a small community of German people who have begun to settle in this region. This essay looks like a treaty on the cultivated flora and provides a lot of useful information not only for the visitors of the seaside and health resort, but also for all the nature lovers. "The botanist will found out surprisingly that almost all the families of the cultivated plants are represented on our Riviera; all those people who love gardening and plants, but also the gardeners who aren't as familiar with the southern plants, will have the possibility to enjoy the suggestions to find often some

advice about the outdoor cultivation of tropical plants. On the contrary, all those people who enjoy nature in a more general way could perhaps draw inspiration in the section dedicated to the esthetic aspect of the plants and the role they play in the formation of the landscape" (Hüttner, 1884). Carl von Hüttner's record is extremely important from the botanical and naturalistic point of view, since he reported a detailed census of both the native and the exotic species which were cultivated in the public and private gardens of Sanremo at that time. About every plant we can find a brief description of the family the same plant belongs to, its botanical name, some curiosities or growing notes and the gardens of the villas in which it is possible to admire them. The guide tells us also that the owners of the different gardens, real plant collectors, used to compete friendly with each other to show the last rarities introduced in Europe. This competition transformed Sanremo in an extraordinary "garden city" with a precious naturalistic heritage. The German community of that time has clearly expressed the passion and the love for the Riviera. In this regard it's worth highlighting that during a period of time in which the great international contrasts that would have caused the World War I and overwhelmed Europe were raising, the Riviera was experiencing a moment of big splendor, comparable to an oasis of cohabitation between different cultures, ideologies and religions. The upper middle classes and the European nobility enjoyed the local pleasures just as Christians, Israelites, Orthodox Christians, Anglicans and Lutherans expressed their faith freely. Carl Von Hüttner's grave is in the monumental cemetery of Sanremo, near other graves which belong to British, German, Russian and Polish citizens. It consists of a sturdy base, on which there is a column with evocative funerary symbols. There is also an inscription in German: Die Lieben gehen, es bleibt die Liebe! (Loves go, Love remains).

EDUARD STRASBURGER

Among all the German botanists who have visited the Riviera and described its naturalistic aspects, Eduard Strasburger deserves a special

mention. He was an internationally renowned scholar and author of essential works about microscopical botany: among his many publications it's worth mentioning the famous book Lehrbuch der Botanik (Textbook of Botany), which was published in 1894 and translated in many languages, including Italian (1897). He was the first to observe the fecundation and the union of the male nucleus with the nucleus of the egg cell in the Angiosperms and from this process he deduced that the cellular nucleus is the main carrier of the hereditary characteristics (1884) (Strasburger, 1995). Also Eduard Strasburger was fascinated by the Riviera and took a journey to Liguria. During his stay he enjoyed the beauty of the places. He had described his emotions and his naturalistic observations in a travel diary, which became famous afterwards: Streifzüge an der Riviera, published in 1904 (Strasburger, 1904). The English translation of this book, Rambles on the Riviera, was published in 1906 and a subsequent Italian translation with the title Un botanico racconta was published in 1944. This work is an extraordinary anthology in form of a novel which describes the naturalistic beauties of western Liguria. As the author walked the paths, crossed the gardens, visited the hills and the villages of the beautiful western Liguria, he depicted and described poetically the landscapes, the climate, the plants and his emotions. Just as the many guides published by foreign visitors who stayed on the Riviera towards the end of the 19th century, also Eduard Strasburger praised the wonderful climate of the Riviera in his work: "While letters and newspapers brought us the complaints of cold and snow north of the Alps, we were before long enjoying the most glorious Mediterranean sunshine...". There are also some references to the gardens: "The pretty garden of the Hôtel Angst was in full luxuriance; the beds resembled baskets of flowers. The huge bushes of the Cape Pelargonium were covered with vermilion flowers" (Strasburger, 1906). The diary described not only the coastal villages, the flowers and the plants in the different places, with continual botanical references, but also his discovery of the local customs, the traditions and the local economy

in an interesting way. The charm of the Riviera is celebrated between the olive groves, the vineyards and above all the palms: "between the full walls of garden of palms, crossing the ways on which the exiles log fold their crowns, the tourist are felt like transported in other world..." (Strasburger, 1906). About San Remo the author wrote: "I was surrounded everywhere by Roses and Acacias, by Pelargoniums and Heliotrope; the air was laden with the scent of Orange blossom and Freezias, of Wallflowers and Stocks" (Strasburger, 1906). In this short description we can understand a prediction of the upcoming epic of the floriculture in the Riviera. Extraordinary examples of botanical poetry are the descriptions of the olive groves, "through which one passes on the way from Old Bordighera to Sasso, are particularly fine... Involuntarily does one pause before these trees to admire the striking contrast between the trunks with their deep shades and the bright blue of the sea and sky" (Strasburger, 1906). He also praised the multicoloured wild flowers and the orchids which could be picked in the olive groves, as spring gifts of a happy land. When the author has described Bordighera he couldn't help but mention the palms which "thrive nowhere better on the whole Riviera. They lend to the place a touch of enchantment and spread an Eastern glamour around".

POETS AND PAINTERS

The appreciation for palms recalls strong emotions that have inspired another famous German, the poet Joseph Viktor von Scheffel, who composed the famous poem "Dem Tode nah" while he was contemplating an evocative group of nine palms near the beach of "Madonna della Ruota", a town district of Bordighera. Furthermore the German painter Friedrich Von Kleudgen used watercolours in his paintings of some folkloristic aspects of Bordighera, such as "woman with *parmureli*" and "*parmurà* absorbed in tying the palm leaves" (Merello, 1995). The latter, an evocative small picture, depicted this ancient cultivation practice, whose aim was obtaining the white palm

buds for the Palm Sunday. The fascination of the palms has also guided the hand of the famous painter Hermann Nestel, who settled in Bordighera in 1887 and depicted evocative corners such as the famous "Vallone del Sasso with palms".

ALBAN VOIGT

Another German botanist who stayed on the Riviera and left an excellent record of his presence is Alban Voigt, the author of the valuable naturalistic guide "Die Riviera". In this handbook the flora of the coastline between Sanremo and Cannes, for which the German-speaking citizens have a particular preference as a winter resort, is described with passion. In fact, it was mainly to the Germans that this guide was addressed to. Voigt stayed in Liguria, attended Clarence Bicknell's library in Bordighera and visited with great interest the Hanbury gardens. He was fascinated by the abundance of acclimatized exotic plants, that he compared for amount and variety to those of the Portuguese botanical gardens of Cintra and Busaco. Among Alban Voigt's observations there is also something about the predominant exotic flora which was spreading to the point that it was supplanting the local flora, even if it was beautiful from the point of view of the landscape and admirable. Alban Voigt enjoyed the local beauty and during his botanical walks he met the curator Alwin Berger, with whom he made friends. The guide is also rich in small anecdots, among which the warm welcome to the visitors of the garden. While he was walking through the garden the author noticed that there weren't any signs which invited the visitors to respect the plants. The reason is simple: since the gardens were attended by Gentlemen and Ladies and because of their sensitivity towards nature there was absolutely no need to display such signs. The guide "Die Riviera" is provided with a detailed map of the garden with the most important groups of plants and the description of each species grown. In addition there were also descriptions of other gardens of the neighbouring Côte d'Azur.

There has been another young and active German-speaking gardener who has left a great mark in the history of Ligurian floriculture: Hermann Stern reached the Riviera towards the end of the 19th century. After having completed his horticultural formation in Switzerland and worked in some important horticultural businesses in Dresden, Geneva and Lyon, he was ready to make his dream of reaching the beautiful Riviera, known for its mild climate and the extraordinary grow of palms and olive groves, a reality. Herman Stern worked first in Nice and then in Monte-Carlo as a gardener, but he had made his very first experiences in the cultivation and the marketing of the cut flowers. Guided by a strong entrepreneurship, he soon set up his own business. In Cannes, under the name of "H. Stern & Co., Exportation de Fleurs" he began to export carnations, anemones, narcissuses, daisies and above all roses. In particular the roses Safrano and Maréchal Niel were very sought-after and they were already grown in greenhouses. It was a period of great transformations and hopes in the whole Europe and Hermann Stern hoped to expand his business. But unfortunately, during a winter day, a night frost destroyed almost the entire outdoor flower production. The export business suddenly found itself in trouble because it hadn't enough flowers to satisfy both the national and the international orders. Confronted with this sudden trouble Hermann Stern expressed a strong intention to restart and searched for new growing areas in the neighboring Italian Riviera, which was praised for its much milder climate. Therefore he reached Italy and visited Bordighera and Sanremo, where he astonishingly discovered an outdoor cultivation of the valuable rose Marie Van Houtte, which hadn't been at all damaged by the Côte d'Azur's nefarious frost. From this observation he deduced that the place was ideal to go ahead with his project.

Fig. 2. Hermann Stern and his son.

In 1891 he started to grow roses in Sanremo and a few years later he grew also carnations, even if he preferred the top quality cultivars to those which were grown until then, in particular those cultivars which tolerated better the long-haul trips. At the same time he widened his offer of roses with the introduction of cultivars such as Ulrich Brunner. Frau Karl Druschki, Kaiserin Auguste Victoria which were exposed and made known during international horticultural contribution exhibitions. The made by the German hybridizers of

made by the German hybridizers of that time to the Ligurian floriculture

can be seen also in the different cultivars' names. The business extended soon its commercial network throughout the northern Europe and the flowers of the Riviera were delivered until to Stockholm, Petrograd and Moscow. The start of this flourishing cut flower trade was followed by an important nursery production of ornamental plants such as *Kentia forsteriana*, *Phoenix canariensis*, *Phoenix roebelenii*, *Aspidistra*, *Dracaena*. Unfortunately, after the outbreak of the First World War, since Hermann Stern was of German origin, he was looked at with suspicion and had to interrupt his business in order to seek refuge in Switzerland. At the end of the war, he resumed his export activity and he set up other cultivations of roses, carnations, bird of paradise plants and succulent plants. On July the 25th 1926, on the magazine "La Costa Azzurra", while Mario Calvino was pointing out the merits of this "pioneer of our floriculture", he fingered Hermann Stern as "another example of a

gardener who knew how to create his fortune and to contribute to the enrichment of our entire region with his intelligent and tireless work" (Calvino, 1926). In 1932 was opened the 1st "Mostra Nazionale di Floricoltura" (National Floriculture Show) and Hermann Stern's business showed an extraordinary collection of cacti and succulent plants in an artistic way. The press of that time mentioned specimens of extraordinary size and "a multitude of little pots on a surface of few square decimeters: a godsend for the modern houses!"

This last remark, which was made by Eva Mameli Calvino in person, an Italian naturalist and the mother of the famous Italian writer Italo Calvino,



Fig. 3. Catalog of succulents produced and traded by the Stern firm.

makes us understand commercial the intuitions and the farsightedness of business strategy of Hermann Stern's factory (Mameli Calvino, 1932), which published also valuable illustrated catalogue. The brochure H. Stern -San Remo, Kakteen Sukkulenten - Piante grasse, is a valuable international guide with nice photos of the business and of the species for sale, but botanical also description with a price list (Stern, s.d.).

Mario Calvino greeted Hermann Stern during his 70th birthday in this way: "a tenacious pioneer of our flower export, who is nicely known not only in Italy but also abroad, where his trade has imposed itself thanks to his strong honesty, seriousness and deep passion for floriculture" (Calvino, 1939).



Fig. 4. Stern's nursery of succulents.

STEFAN NEUHOFF AND KARL FÖRSTER

In 1894 another German, Stefan Neuhoff, moved to the Riviera. His name became very soon famous for the cultivation of the mimosa and was also included among the pioneers of the Ligurian floriculture. He was a good grower who "knew how to earn a wide profit from the experiences of a master such as Ludwig Winter" (Taggiasco, 1930). We owe him the spread of the cultivations of mimosa in his plot of land in "Piani di Borghetto", one of Bordighera's town districts, where, in addition to the harvest and marketing of the leafy branches, he produced millions of little plants to sale to the other flower growers. Dino Taggiasco wrote in his book "Bordighera, storia e leggenda, usi e costumi, istituzioni e cittadini

benemeriti" (Bordighera, history and legend, customs and traditions, institutions and meritorious citizens): "This real king of the mimosa has contributed to crowd our hills and our plain and to give wealth to many smallholders" (Taggiasco, 1930). Stefan Neuhoff's actions have been particularly appreciated also by Princess Adelhaid of Hohenlohe-Langenburg, granddaughter of the Queen Victoria, who has dwelled for some time at the Hôtel Angst in Bordighera. The World War I was fatal also for Stefan Neuhoff's activity and destroyed the work he had started. After the end of the war, he started decisively and courageously to rebuild his business. Stefan Neuhoff practised diffusely the graft on the Mimosa floribunda, which was already tested in France, thus creating plants which were more hardy and stood better the cold which sometimes threatened the cultivations of the Riviera (Taggiasco, 1930).

It's worth remembering also the German botanist, landscape gardener and poet Karl Foerster, who spent his formative period (1902-1903) working under his fellow countryman Ludwig Winter in Bordighera, although his stay on the Riviera has been short. Although only few of his works have been translated in Italian, he is still considered as one of the precursors of the recent landscape leanings related to the use of the herbaceous perennial plants and of the naturalistic and sustainable garden. Born in Berlin in 1874, after the period during which he has devoted himself to the horticultural studies, he reached Bordighera where he attended and worked in Ludwig Winter's nurseries. Here, under the guidance of Ludwig Winter, he began to know and to develop a passion for the use of the herbaceous perennial plants in the Mediterranean landscape. In 1903 he came back to Germany, he made the most of the experience he had acquired and set up a nursery of his own. His outlook on nature and the landscape was at the vanguard for that time and made him soon become one of the pioneers of the use of the wild species in the German gardens, among which the grasses. The first catalogue of Foerster's nursery was published in 1907 and his book "Vom Blütengarten der Zukunft" (From the bloomed garden of the future),

which was published in 1917, became a manifesto of the avant-garde landscaping.

ROBERT DIEM

Among other German pioneers of the floriculture, it's worth focusing on Robert Diem, a native of Württemberg. Born in 1892, since he was keen on flowers and botany, he devoted himself very soon to the gardening and he worked in several horticultural businesses in France and in England. He tried his hand at growing outdoors *Asparagus plumosus*, which was very sought-after as cut leafy branch, on the Côte d'Azur: "Before then it was grown mainly in pots, in the greenhouses of some keen amateur and few professional horticulturists, most of who were English; only in Germany and France" (Stacchini, 1929).



Fig. 5. Robert Diem in his nursery of Asparagus.

It's worth remembering that *A.plumosus* was introduced in Europe in 1882 from South Africa and Robert Diem was the first European grower to attempt the field cultivation, protecting his cultivations with reed mats, branches of *Erica scoparia* or palm leaves: "who hasn't visited Robert

Diem's greenhouses and arbours in the greenhouses of the Nervia valley, who hasn't walked under the trellis of the Vallone del Sasso?" (Stacchini, 1929). With dedication and tenacity, after several experimentations he managed to obtain vigorous little plants and able to guarantee an abundant field vegetation from seeds which had come from South Africa and California. The solution of the horticultural problem allowed also to grow and to launch on the market other species of the genus Asparagus. Unfortunately, his booming activity of horticultural producer was interrupted with the outbreak of the World War I and Robert Diem had to leave his cultivations in Antibes to take refuge in Italy. Here he took over the Dorner plant near Camporosso and established a large company, with extensions in the Nervia valley, in the "Vallone del Sasso" and in Arzilia, near Bordighera. In 1929 it was estimated that A. plumosus was cultivated on a total area of about 135,000 square meters (about 33 acres) (Stacchini, 1929) and many local cultivators followed Robert Diem's example. The soils which are naturally sandy, such as the coastal plain of Camporosso, offered optimal conditions for this kind of cultivation. At the same time the presence of the olive groves provided that right shade which helped the mixed cultivation of Asparagus and the olive grove. The development of the cultivation of Asparagus spreaded so fast that Paolo Stacchini (1929) wrote that some dozens of tons of Asparagus were about to be launched on the market. Towards the end of the 1930s, all the flower markets in Europe and in North America as well as the flower shops in the little towns were provided with these valuable little plants and cut leafy branches. In Bordighera the profitable cultivation of Asparagus spreaded in the shadow of the palms. The palm grove of the Vallone del Sasso partially modified the typically Ligurian intercropping, which was made of fruit trees and vegetable gardens and turned it into an intensive flower cultivation: "in the Walloon of the Arzilia, Robert Diem grows outdoors A.plumosus very successfully, in order to get the seeds; and he does this under the palms which he himself has wanted to leave where they are, with a commendable sense of aesthetic conservation, in order

not to alter the tropical appearance of the pleasant position" (Stacchini, 1929). This remark shows the sensitivity and the culture of this agricultural entrepreneur, who had a modern and far-sighted opinion about the awareness of the need to respect the places and of their beauty. These words are an excellent piece of evidence of the romantic German culture and of the sensitivity to the beauty of nature which is threatened by the temptation of an overexploitation. Robert Diem remained the uncontested king of the Asparagus until the 1950s, then he sold his business to the Bock family, who had German origins like the same Robert Diem. Robert Diem's work has had an important entrepreneurial implication on the territory, but also social consequences that pushed Paolo Stacchini (1929) to declare: "The most prolific practice embraces the kindest poetry, and the love for flowers and the ornamental plants not only helps to refine customs, but also gives work to our workers and wealth to our country". Robert Diem has also spreaded among Ligurian cultivators a series of technological innovations such as the sprinklers. He expressed clearly his desire to make the most of all the experience he had acquired in an article which was published on the magazine "La Costa Azzurra Agricola e Floreale" (Rinaldi, 1932). This technical article was presented by the director of the magazine as: "a disinterested and very noble gesture, which crowns a life full of tireless and intelligent work" and informed the readers about a system devised by Diem to heat the greenhouses and to prevent any damage caused to the cultivations by the cold. At the end of his article the author expressed his certainty that the system he had suggested would prove itself useful for the cultivators and at the same time would give him "the satisfaction for having contributed again to the welfare and the progress of floriculture". During the same period the cultivation of the lily of the valley spreaded in Holland, England, France, America and Japan. "In Italy this cultivation is carried on successfully by Robert Diem's business, who has credit for having obtained and spreaded the cultivar 'Valnervia', which represents the result of a good selection and acclimatization process of the cultivar

Excelsior" (Rinaldi, 1932). The industrial cut flower cultivation of Gerbera was soon added to the other flower productions of the Riviera and the credit for this introduction belonged again to Robert Diem, who carried out also a remarkable genetic crop improvement during about 30 years (Volpi, 1971)! Robert Diem saw for the first time Gerbera in Antibes in 1904, on his way back from the International Horticultural Show of Düsseldorf. Since then he developed a passion for the growing of this beautiful Transvaal daisy, which owes its name to another German naturalist, Traugott Gerber (1743).

WALTER HERRFELDT

Walter Herrfeldt, still of German origins, is remembered first of all as a keen succulent plant collector and as the owner of the horticultural business "Primores" (Calvino, 1934). In his splendid place on the sea, near the former Osteria del Mattone in Bordighera – mentioned by Giovanni Ruffini (1855) in his work "Doctor Antonio" – he used to collect and grow succulent plants outdoors.

Because of the mild climate, the high quality of his productions and the value of the species he grew, he has been able to start up a business of his own which was internationally appreciated. In the september 1936 issue of the magazine *The cactus Journal* we can find a promotional box on page 28: opportunity for specialists and collectors. Most important cacti and succulent nurseries in Italy are selling their whole stock of plants. On account of private reasons. Extraordinary opportunity for you. Please ask for particulars. PRIMORES-Bordighera, Italy. The business is very well and meticulously organized, in complete accordance with the German culture: "Hundreds of nearly microscopical plants are disposed in a strict symmetrical order in their pots... The business, which is very interesting from a scientific point of view, was visited by botanists, scholars and groups of cultivators". The most delicate plants were cultivated in greenhouses which were heated with a sophisticated system of pipes that carried water and distributed evenly the heat. Walter

Herrfeldt's desire to deepen his botanical knowledge and the knowledge of the growing techniques pushed him to summon in Bordighera one of the most important succulent plant experts of that time, Walther Haage. Walther Haage's stay in Bordighera helped to increase the nursery's prestige and also increased the German scientific community in the Riviera, which already included several prominent personalities. Walter Herrfeldt's business took part to the first "Mostra nazionale di Floricoltura" (National Floriculture Show), which was held in San Remo in 1932, with a rich collection of succulent plants. In an artistic, Mexicaninspired scenario, several groups of different specimens of the genera *Mamillaria, Pilocereus, Mesembrianthemum, Cereus* and *Lithops* were exposed.

CURT BACKEBERG

Among the most eminent German scholars who have attended the Riviera we mustn't forget Curt Backeberg (Newton, 1966). This extraordinary personality, driven by his great passion for succulent plants, became internationally renowned, even if he has been sometimes preempted. His interest for plants and photography pushed him to make several exploratory trips, mainly to Mexico and South America. In Bordighera he attended the nurseryman Ronco Antonio, one of Ludwig Winter's nephews, who grew cacti with passion and competence. Curt Backeberg learned from the young Antonio the innovative technique to perform grafts of Cactus on Peireskiopsis: this cultivation practice was mentioned in the first volume of his valuable monography *Die Cactaceae*, published in 1958. He wrote several travel diaries and made a rich photographic record, above all about botany and nature in general. Among his main works there is the above cited Die Cactaceae, a six volume set (Backeberg, 1958-1962). After the World War II Curt Backeberg remained on the Côte d'Azur and dedicated himself to the cultivation of the collection of Marnier-Lapostolle's botanical garden, Les Cèdres.

KARL SPRENGER

Among the German botanists it's worth mentioning also Karl Sprenger, a major personality of the Italian horticulture. Karl Sprenger's precious work as a botanist and nurseryman was remembered by R. Pampanini (1946). Although he didn't carry out his activity on the Riviera, he still visited it, even if fleetingly, and he met Ludwig Winter and Alwin Berger during these visits. Karl Sprenger's reputation as a botanist is related to the multitude of cultivars of Canna indica, the socalled edible cannas, which beautified the European gardens during the 20th century. Towards the end of the 19th century he was joint owner of the business Dammann & Co. of Naples and he selected a splendid hybrid of Canna indica, whose flowers were large and beautiful, and gave it the name Italy. Karl Sprenger's bond with western Liguria dates back to the dedication he lavished to make Asparagus sprengeri known (a species that bears his name), which would ensure the commercial success of Robert Diem's business in Bordighera. This species was discovered in South Africa and the first plants were introduced in Germany in 1892; from that moment began the commercial success of this green frond which conquered the world market. Karl Sprenger contributed to the main horticultural periodicals of that time, among which the "Bullettino della R. Società Toscana d'Orticoltura" and "Gartenflora".

BRAÜER AND KOERNER

The German flower growers of the Riviera have also contributed in a significant way to the genetic improvement of the flower cultivations. On the "Gartenwelt" we can read some words about a rose cultivar produced by Paul Braüer, an hybridizer of Sanremo, and launched on the market by J. C. Koerner, a flower grower from Bordighera: "Among the various latest roses which were marketed this year, 'Principessa di Napoli' is surely one of the most beautiful ones and, as far as I already know, one of the most satisfying ones... the flowers have a bright pink

coloration, which tends to the opaque yellowish on the inside, whose tone stands out with more intensity and beauty at blooming time... Its scent is very delightful and delicate" (Eckardt, 1897). The text goes on specifying that since this cultivar which has been produced in Bordighera bloomed very much, it was resistant to diseases and since its stems had come to Frankfurt in excellent conditions, it was expected to have a good success on the German market. The process of genetic selection which has been performed by the German hybridizer Paul Bräuer recorded some important successes in the field of the cut flower cultivation of carnations. The German grower Bräuer in San Remo was actually the only one who devoted himself to the research of new hybrids of Tea rose. "His successes are quite satisfactory, above all for the roses of the Riviera; e.g. his creations Contessa Cecilia Lurani, Principessa Bülow, William Hartmann, and Principessa Victoria di Battenberg, Zarina Alexandra, and above all the new rose, Re del Siam" (Kiese, 1912). The villa where Mr. Bräuer carried on his research of new cultivars was at the bottom of the Monte Solaro, near San Remo. The German hybridizer deserves also a special mention for having written a series of interesting articles about the culture of roses in the western part of the Italian Riviera. These articles have been periodically published between 1891 and 1911 on the German magazine Rosen-Zeitung (Bräuer, 1891, 1895, 1896, 1907, 1911). As a reaffirmation of the close bond between the history of the Ligurian floriculture and the Germans, it is curious to know that the rootings of Rosa indica 'Major' which have been used as rootstocks during the 1900s came mostly from Germany.

LEOPOLD ANGERER

Among the various German-speaking personalities that have helped to create gardens on the Riviera, Leopold Angerer deserves a special mention. The great affection and gratitude for the German-speaking guests of the local population has become clear in a short written presentation of this illustrious guest: "The people of San Remo

have also a strict obligation of gratitude to many foreigners, who after having purchased plots of land in our country, they establish here their residence, and since their minds and their hearts have been accustomed to the great thinking and the civil uprightness, they do our citizens a very good turn. And among these strangers, I'd love to mention Mr. Leopold Angerer, a lawyer from Innsbruk" (Astraldi, 1914). This Austrian guest was a botanist, keen on books and travels, who spent the winter season in Sanremo in a villa with an Art Nouveau architecture, where he held an extraordinary collection of cycads and several species of palms. But above all it was all the Encephalartos from South Africa and the Dioon from Central America that made up an unequaled botanical patrimony for that time. This extraordinary collection, which was comparable to a collection of living fossils, has in part survived till now and some Encephalartos and palms of rare beauty can still be admired.

CARL ERNEST OTTO KUNTZE

Among the German botanists who have stayed on the Riviera we mustn't forget Carl Ernest Otto Kuntze. He was a friend of Alwin Berger's, who came often to visit him in his little countryhouse in San Remo, where he lived (Berger, 2016). Otto Kuntze's name is linked to a critical revision of the botanical nomenclature of that time. Born in Leipzig in 1843, he made a series of botanical excursions worldwide between 1874 and 1876 and he made up a precious ethnological collection which he donated to the museum of Leipzig. He published a three volume set, *Revisio Generum Plantarum*, in which he exposed his taxonomic vision of the plant world (Kuntze, 1891-1898). In 1905 he took part to the Botany International Congress which was held in Vienna, but his valuable job was disputed by the scientific community. He pursued his studies in San Remo until 1907, his deathyear.



Fig. 6. German traders of flowers at the Casino of San Remo in 1925.

CONCLUSIONS

The German contribution to the transformation of the landscape of the Riviera and to the development of the industrial floriculture has been undoubtedly very important. Unfortunately the scenarios of the international politics have often meddled with this development and this cultural and economic transformation.

On April the 3rd, 1932 the first National Floriculture Show was opened in Sanremo; it was a huge success and attracted thousands of visitors. The Show was held in the municipal garden of the Villa Ormond, which had been bought by the municipality not long before and renovated so that it could hold great flower exhibitions. It was an extraordinary showcase for the floriculture and also an opportunity to admire the high quality of the businesses of the German-speaking cultivators who had chosen the most western part of Liguria to set up their businesses. Hermann Stern's business showed up with *Vesuvio*, an amazing scarlet

carnation, and *Manon*, which was a beautiful uniform pink colour carnation, with a complete calyx, of medium size, thus launching on the market a new tendency concerning the production of carnations. Also the *Amaryllis*, the artistic presentation of Cacti and succulent plants and the superb groups of *Strelitzia reginae* were admirable. There was also



Fig. 7. The smile of Rose Marie, Hermann Stern's young daughter, with a bouquet of roses symbolizes a happy relationship between the flowers, the Riviera and Germany.

Robert Diem's business, which presented its Lilies of the Valley grown in Bordighera and a collection of plants of the genus Gerbera. In a wide room of the exhibition hall, which decorated with much good taste, the plants of the genus Gerbera were displayed both potted and as cut flowers. The collection featured flowers with delicate shades and, curiously, the seed technique and the different stages of growth were showed to the visitors in various little pots. The collection of ragworts of A. Hillebrand's business was very beautiful and admired. Also Ludwig Winter's business took part to the exhibition with palms, Cycads and "the most beautiful

group of agaves, aloes, mesembryanthemums, echeveria, etc. made by different species and cultivars, showed with beautiful specimens" (Mostra nazionale di floricoltura, 1934). The juries rewarded abundantly the productions of these businesses and it has been a triumph of gold medals and special prizes. The great bond between the German horticultural world and the flower businesses of the Riviera is documented also by a

visit of German university students of the Agricultural University of Berlin. The students visited the prestigious headquarters of the "Istituto Sperimentale di Floricoltura" of Sanremo, where they admired some collections of ornamental flower plants and roses. Then the group reached Stern's nursery, which was renowned for its cultivations of cacti. The students have visited also other businesses managed by German cultivators, such as Ludwig Winter's nursery and Herrfeld's and Diem's ones.

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