

B
0
0
0
0
0
9
6
6
5
1



UC SOUTHERN REGIONAL LIBRARY FACILITY



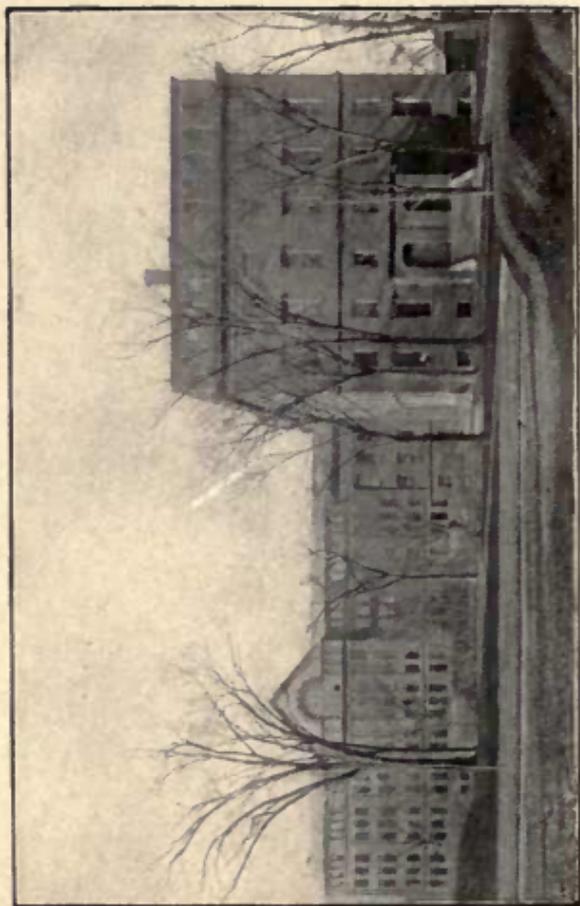
FRANKLIN BALDWIN WILEY



5468 M22

150 | 500





THE UNIVERSITY AND AGASSIZ MUSEUMS.

FLOWERS THAT NEVER FADE

AN ACCOUNT OF THE

WARE COLLECTION OF BLASCHKA GLASS MODELS
IN THE HARVARD UNIVERSITY MUSEUM

BY

FRANKLIN BALDWIN WILEY

Author of "The Harvard Guide-Book"



BOSTON
BRADLEE WHIDDEN, PUBLISHER
1897

JK

COPYRIGHT

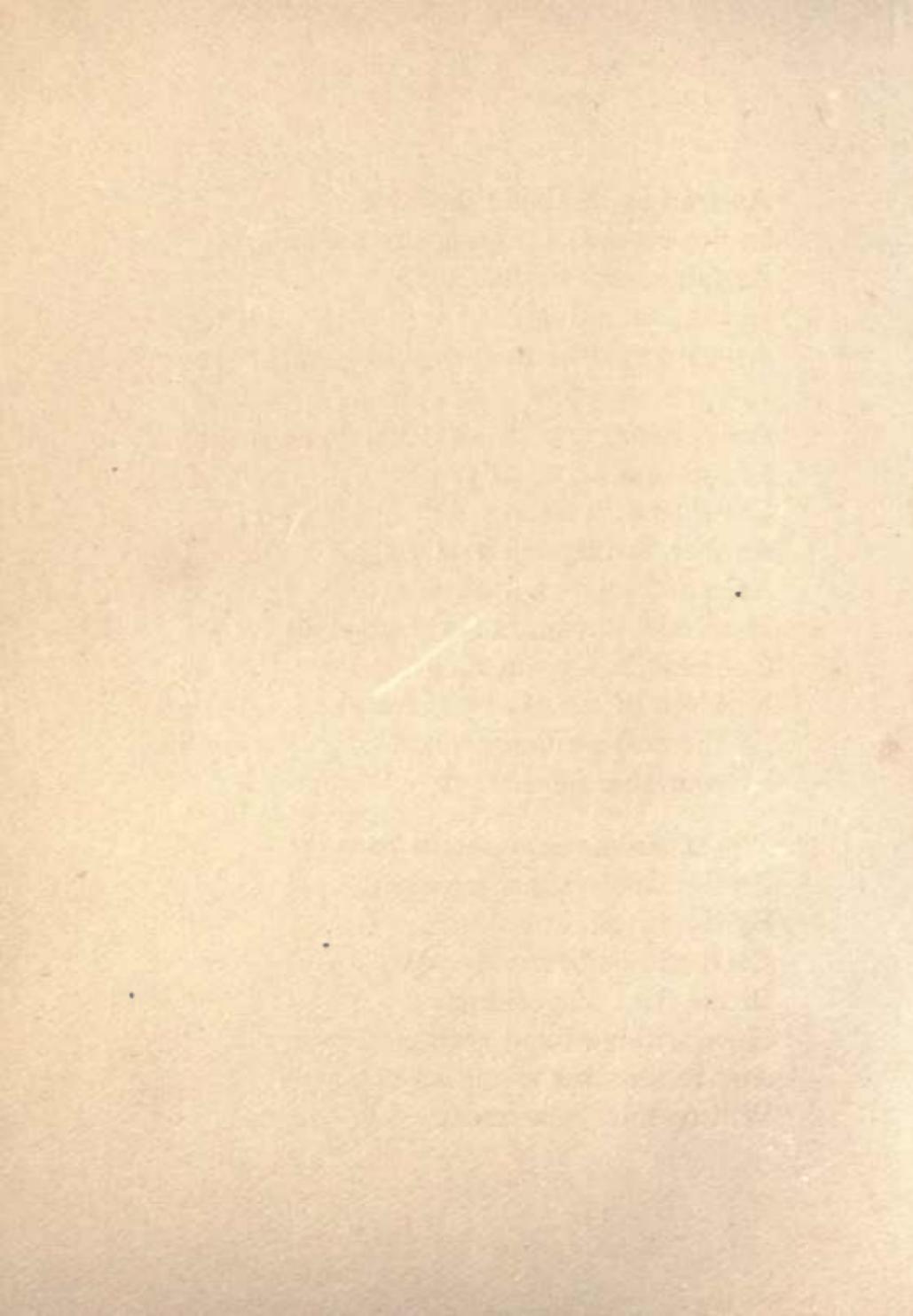
1897

BY FRANKLIN BALDWIN WILEY

NOTE

THIS account of the Ware collection of Blaschka glass flowers at Harvard appeared originally in the Boston Transcript. It was prepared for that newspaper in compliance with requests from several correspondents for information concerning this unique collection. The issue containing the account has long been out of print, but the inquiries for the article which are still made from time to time encourage the belief that a reprint of it may not be unwelcome. It has therefore been carefully revised and considerably extended, and is now republished in a more convenient and permanent form.

F. B. W.



As frail as the buds that first
In the bosom of Spring are nursed,
As fair as the blossoms gay
In the coronal of May,
As bright as the flowers that swoon
In the sultry breath of June
Are these sprays that seem to have grown
In the suns of a native zone ;
Glowing with tints as rare
As their living sisters share ;
As real to observing eyes,
Here each bloom in its beauty lies,
Once hid in the ductile glass,
Now out of the plastic mass
By the deft artificers made
Flowers that never fade.

The blossoms that genius brought
To the studio ere it wrought,
By the magic of its art,
Each exquisite counterpart,
In the dust of yesterday
Have withered and crumbled away ;
And the master whom all deplore
Will re-enter nevermore

The home at Hosterwitz,
Where a lonely artist sits ;
But by secrets none may guess,
Lo ! in lasting loveliness,
Here, here are blooming still
The flowers he formed at will ;
And a filial love still lays
On his bier these fadeless bays.

The varying seasons bring
No change to this blossoming :
The spring never ends for these
Enduring anemones ;
The summer's reign never closes
For these perennial roses ;
The autumn's horn never holds
Even one of these marigolds ;
And the winter never comes
To these bright chrysanthemums ;
For alike through the frost and heat,
Spring showers and winter sleet,
Bloom these lilies and violets,
Blue flags that no wild bee frets,
Red mallows, purple azaleas,
Columbines, cowslips, and dahlias,
In natural pomp arrayed,
Flowers that never fade.

FLOWERS THAT NEVER FADE

Flowers of everlasting blow.

KILMENY.

*Ye bright Mosaics ! that with storied beauty
The floor of Nature's temple tessellate.*

HYMN TO THE FLOWERS.

*Learn, O student, the true wisdom.
See yon bush aflame with roses,
Like the burning bush of Moses.
Listen, and thou shalt hear,
If thy soul be not deaf,
How from out it, soft and clear,
Speaks to thee the Lord Almighty.*

HAFIZ.

FLOWERS THAT NEVER FADE

I

SINCE flowers were first created many futile attempts have been made to seize and fix the fugitive grace and loveliness of these fairest and frailest of all growing things. Their semblance has been carved in marble and painted on canvas and worked in wax and formed out of rubber and silk, and even out of paper. But the imitations in marble are cold and colorless, and those on canvas too often tame and conventional, while those in wax and silk and rubber and paper lose their brightness and freshness almost as soon as the beautiful blossoms from which they are copied lose theirs.

It remained for an artist of Bohemia, living in Germany, and his son, both marvellously deft and cunning workers in glass, to surmount all obstacles, and to solve the problem of reproducing flowers not alone as they actually appear in color and form

II

HARVARD UNIVERSITY is the fortunate possessor of the only collection of these exquisite creations now in existence. The larger part of it is housed in a large, well-lighted room on the third floor of the University Museum at Cambridge, reached by way of the Oxford-street entrance, and overlooking the pleasant green quadrangle that lies between the museum building and Divinity Hall. A number of the models, however, are shown in the hallway and in an adjoining room on the same floor. On each of the two doors leading into the main exhibition room is painted the inscription:—

The
Ware Collection
of
Blaschka
Glass Models
of
Flowers.

Within the room a placard on the north wall gives the following information:—

These Glass Models
 Illustrating Vegetable Structure
 Are Part of a Collection (as yet Unarranged)
 Presented to Harvard University

By

Mrs. Elizabeth C. Ware and Miss Mary L. Ware
 in Memory of
 the Late Dr. Charles E. Ware (Class of 1834)
 The Models Are the Work of
 Leopold and Rudolph Blaschka
 of Germany.

On the west wall there is a bronze tablet,
 which is thus inscribed:—

MDCCCXIV MDCCCLXXXVII
 IN MEMORIAM
 CAROLI ELIOT WARE
 MEDICI
 HVIVS VNIVERSITATIS ALVMNI
 HASCE IMAGINES
 DONAVERVNT
 CONIVX ET FILIA SVPERSTITES
 RVRA FLORES AMICOS EX ANIMO COLVIT
 VALDEQVE DILEXIT¹

In the forty and more plate-glass cases
 containing the collection there are now

¹ "1814-1887. In memory of Dr. Charles Eliot Ware, a graduate of this University, these models have been given by his wife and daughter, who survive him. He cherished and loved with all his heart the country and flowers and his friends."

displayed about eight hundred of the large models, representing sprays and clusters of flowers, and more than two thousand of the magnified parts, showing in detail the structure of the different plants. From a scientific point of view the magnified details may perhaps seem at first sight to be the most interesting; but a close examination shows that in scientific as well as in æsthetic value they cannot vie with the large models.

These wonderful productions are at once so artistic and so accurate that the very flowers themselves seem to be lying before us. Here are dahlias, rhododendrons, sun-flowers, begonias, and marigolds apparently just plucked in the garden, and buttercups, cowslips, blue gentians, ground laurel, swamp-pinks, and trailing arbutus to all appearances fresh from the fields. This trumpet creeper, with its clustering blossoms of brick red and pale orange, must have been recently cut from the vine growing about some one's front porch, and these large-flowered dog's-tooth violets, purple azaleas, and pretty cone-flowers, with their velvety brown centres and ray-like petals of deep yellow, cannot have been gathered very long.

Equally remarkable are the glowing brilliancy of the tints that range from the deli-

cate azure of the blue-tipped blossoms of the ivy morning glory to the fiery splendor of the scarlet clematis, the red mallows, and the cardinal flowers, and the consummate skill of the workmanship which finds it as easy to reproduce, for instance, the feathery white bloom of the fringe-tree as the large, thick, spongy leaves of the milk-weed.

Still more marvellous is the absolute accuracy with which every natural detail has been reproduced. Not only is it impossible to detect any inaccuracies with the naked eye, but even a microscopic examination fails to reveal any. Such an examination has been made by a skilled botanist for his own satisfaction.¹ He was surprised and delighted to find nature so accurately followed in all those details that could be seen by the unaided eye; but he was persuaded that the lens must surely reveal inaccuracies which were otherwise invisible. It seemed to him impossible that the artists could have produced a plant, covered perhaps with minute flowers, with such exactness that any flower, taken at random, should follow the specific character of the particular species as if the natural plant

¹ See the article on the Ware Collection in the *Botanical Gazette* for April, 1894. The text of the above paragraph, as well as of the one that follows it, is substantially quoted from that excellent paper.

were before him, so that he should find the right number of stamens in every flower, the proper degree of pubescence on the stem, and such other characteristics as only a microscopic examination would reveal. He compared each plant with his own herbarium specimens, relying more on the natural plant than on the printed characters. He found that each flower had its separate character, like nature, and that the indications that one flower was older than another were shown, from the young buds through the partly expanded blossoms to the fully opened flowers, as in the living plants.

“Sixteen species I examined by careful comparison,” he tells us, “besides making a more general observation of a large number. I sought faithfully to find some error, something systematically wrong. A fair criticism should disclose whatever faults may exist, but I failed to find such faults. In a specimen cluster from the angelica-tree, with its flowers so small that their structure can be seen only with a lens, while many of its buds are so minute as to be indistinguishable to the naked eye, I counted of buds, blossoms, and developing fruit, from twenty-five hundred to three thousand. And yet every flower has its five petals, and five alternating stamens with long filaments. I sought to find on the under part of the

cluster some flowers perhaps less carefully done, as being practically out of sight; but they were all equal in their perfection. Were every specimen in the collection to be inverted, the same accurate work would be seen."

While this wonderful exactitude of detail and perfection of finish are also observable in the magnified parts, they do not appear to be so extraordinary in those because most of them are from ten to a thousand times larger than the natural size, and therefore less dexterity is required in their manipulation. But in them also the close observer will find that similar parts, which to the casual glance seem to be the same in every respect, are yet as unlike as the complete flowers. Each one has its own special characteristics, just as in the large model of the common milk-weed, for instance, no two of the leaves are alike, but each one shows the same variation that may be observed in nature. Such fidelity to life in the details, as well as in the forms and colors of the flowers, is amazing. Who are the men, one naturally asks, whose art can compass such astonishing and delightful results? Where do they live? What is their method of work?

III

As one might have expected, they are from Bohemia, a country which has long been celebrated for the rare excellence and high artistic merit of its glasswork. Superior skill in this pursuit is hereditary in the family of the Blaschkas. They lived in Venice when its far-famed glass-making was a national art, and all who practised it were held, so it is generally claimed, to belong to the nobility. At the beginning of the seventeenth century they removed from Venice to Bohemia, into which country, according to their account, they introduced the artistic manufacture of glass. They possessed certain technical secrets, some of which, such as the use of color, the preparation of the more fusible kinds of glass, and a peculiar method of annealing, are still utilized in their work.

One of the more noted of their number was Joseph Blaschka, a skilful artificer in gold and silver and glass, and Leopold Blaschka was his son. Born on May 27, 1822, at Aicha, a village of northern Bohemia, situated about twenty miles from

Buntzlau, young Leopold early showed artistic tastes. After he had studied in the common school of his native town, Elsner the painter, who lived in his father's house for a time, gave him lessons in painting and advised him to devote himself to that art. His grandfather was also anxious that he should do so. But his father held other views about his life-work, and in deference to his parent's wishes, Leopold went to a goldsmith's near Turnau, one of the old walled towns of Bohemia, on the river Iser, a few miles distant from his birthplace, where he served an apprenticeship. He then returned home, and while following the occupation of making fancy articles in glass and the precious metals for export by various business houses, spent his leisure time in the study of natural history. When about thirty-one years old, in 1853, the state of his health and the interests of his business led him to undertake a voyage to this continent on a sailing vessel. Upon this journey he spent much of his leisure time in the study of marine invertebrates, and made many drawings of them during a calm at sea.

After his return to Europe in 1854, he began the manufacture of specimens of these sea-animals in glass, and produced the first of the glass models of flowering

plants. These were seen by the botanist, Prince Camille de Rohan, of Prague, who was residing at Sichrow, near Aicha. He was so pleased and impressed with their extraordinary beauty and fidelity to nature that he gave his gardener orders to supply Blaschka with whatever plants he might need for the prosecution of his studies. Even the rarest orchids were to be placed at his disposal.

He was thus enabled by 1862 to complete a collection of models in glass of about sixty species of these valuable exotics. After being exhibited during the same year in the palace of Prince de Rohan at Prague, and during 1863 in the Botanic Garden at Dresden, the collection was sold to Professor Morren of Liege, and finally found a resting-place in the Natural History Museum in that city, where it was unfortunately lost in the fire which destroyed that building in 1863.

The fate of these models and various annoying circumstances connected with another similar collection gave Blaschka such a distaste for this branch of his work that he ceased the production of glass models of flowers, and turned his undivided attention to the preparation of a collection of marine invertebrates, consisting of models of sea-anemones and similar forms of ocean life.

Of this first set, the larger part is still to be seen in the Natural History Museum at Dresden. From 1870, when he took his only son, Rudolph, into partnership, he began to increase his production of the models of marine invertebrates that are now among the most interesting treasures in all the natural history museums throughout the world, including the Museum of Comparative Zoölogy at Harvard. For the next sixteen years the two artists gave their time exclusively to the pursuit of this branch of their life-work.

·IV

IT was not until 1886 that, at the solicitation of Professor George Lincoln Goodale, the director of the Botanic Garden of Harvard University, they consented to resume the modelling of flowering plants in glass; and then it was only with the greatest difficulty that he secured their services, for at that time their entire attention was still given to the satisfactory and profitable production of their models of marine animals. Professor Goodale has himself given an account of this first momentous interview with the artists.¹ He had long before then been considering in what material plants and their magnified parts could be rendered permanent without being either conventionalized or exaggerated.

“This important question,” he says, “was happily answered one day, when, with this burden on my mind, I examined

¹ This account and many other interesting details are contained in the article on “The Blaschka Glass Flower Collection” in the Harvard Graduates’ Magazine for July, 1893.

for the hundredth time the synoptic collection in the Museum of Comparative Zoölogy. The Blaschka glass models of marine invertebrates suggested a possible solution of the difficulty. The next step demanded was a journey in 1885 to the studio of the Blaschkas, then at Dresden. It was with difficulty that these artists were induced even to listen to my proposition, much less to entertain it favorably. It seemed to me that the voyage and the interview would prove fruitless. The Blaschkas declared that they were busy from morning till night, every day in the week, with the study and construction of models of animals, and that no inducement could lead them to abandon the known for the unknown, and undertake the construction of flowers. My knowledge of German was imperfect, and I succeeded in not understanding this refusal. On a shelf in the reception room there stood a vase of brilliant orchids, indicating that the artists were very fond of flowers, and this opened the way for my last line of attack. You can imagine my surprise when I found that the orchids before me were of glass, and that they had stood uninjured, though without protection, in an open room since 1862. A few questions and a little diplomacy soon changed the face of the matter. What the artists had done once they could

do again. Thus the principal difficulties were overcome."

All minor objections were eventually set aside, and a satisfactory agreement was at last reached on the Blaschkas' own terms. This result was in no small degree due to the strong desire of the elder artist to give his son every opportunity to extend his researches in botany, a study in which he had already made considerable progress and for which he showed a special fitness, and also because of the kindly sentiment that Leopold Blaschka had felt for America ever since his visit to this continent in 1853.

The artists began their work for Professor Goodale in 1886, and they sent on the case containing the first shipment of specimens in the autumn of 1887. When it arrived in Cambridge, Professor Goodale found that the fragile contents had been badly broken by the carelessness of the inspectors in the custom house at New York. They had opened the case of models and unwrapped them in order to find out whether there was any duty to be assessed upon them, and had then nailed the case up again and forwarded it to its destination without troubling themselves about the condition in which its contents would arrive there. The result was that Professor Goodale, to use his own ironical expression, "had

the pleasure of receiving a box of broken glass."

Even the fragments, however, served to indicate the high quality and artistic excellence of the work accomplished by the Blaschkas. Imperfect as the specimens were, they attracted great attention, and gave promise of surprising results. Mrs. Elizabeth C. Ware and her daughter, Miss Mary L. Ware, who had already been liberal benefactors of the botanical department of Harvard, authorized Professor Goodale to make a provisional contract with the Blaschkas for the production of a certain number of the models. These were received in excellent order, after being carefully passed by the custom-house officials, and gave complete satisfaction. A new agreement was then signed, and it was decided that the collection should form a memorial to Dr. Ware.

Later on, this agreement was modified several times in order to secure a larger number and a wider range of models, and finally, in 1890, a contract was executed at the consular office in Dresden by the terms of which the artists agreed to give their entire time to the Museum of Harvard University for the term of ten years, and to furnish an average of one hundred models a year.

V

THIS wonderful average of production was maintained until the death of the elder Blaschka, on July 3, 1895. The two artists worked as one man, especially in the use of the secret parts of their art. Neither took any important step without first consulting the other, and sometimes both worked on one specimen, one making the stem, for instance, and the other the leaves and flowers. Their devotion to their art was untiring, and their rapidity of execution astounding even to those most familiar with glass-making, while to those who were unversed in the process it seemed almost magical.

Certain of their methods of procedure and processes of manipulation were of course kept secret, even when they permitted Professor Goodale to see them at their work, assuring him that he was the only one who had ever been allowed to watch them when they were busy in their studio. They pointed out to him that their glass-making was by no means glass-blowing. After the glass had been made plastic by

heat, it was manipulated under the simplest conditions and with the least complicated appliances. The secrets which Professor Goodale was not allowed to share were concerned chiefly with the preparation of the more fusible kinds of glass, the means of coloring it, the use of cements, and the methods of annealing. Professor Goodale was told that part of the color was imparted to the glass while fused, part added while the glass was cooling, and part placed on afterward. The artists also showed him that all the colors were permanent, and that they were not affected by light.

Twice during this period the younger Blaschka applied for permission to suspend his work and visit America for study. The first time was toward the end of 1891, when he asked for a leave of absence of six months. As soon as he arrived in Cambridge, in 1892, he began to study the plants in the Botanic Garden, the Arnold Arboretum, and the Bussey Institution. When the spring opened he went to Jamaica, and later on to California for the purpose of collecting material. On these trips he secured a number of specimens, and made analyses and over two hundred drawings in color of the more interesting species. Returning to Cambridge, he spent a short time there in further study and in repairing

broken models, and then went back to Germany.

His second journey to this country was made in 1895; and he was pursuing his studies of the vegetation of the South when his work was rudely interrupted by the sad news of his father's death, and he sailed at once for Germany. The elder Blaschka was in his seventy-fourth year when he died, and the illness that terminated thus fatally lasted only a few days.

VI

ALL the work of Leopold Blaschka and his son was carried on at their residence in the little town of Hosterwitz, a few miles above Dresden on the Elbe, not so very far away from the old home at Aicha in Bohemia. The house is a large one, built of brick and wood in the composite style common in German country places. It was once owned by a government official, and contains a number of rooms, of which one is used as a music-room and another as an exhibition hall, while two are used as studios. This residence is surrounded by a good-sized American garden, supplied by Professor Goodale with the more common native plants of temperate North America. From among these plants come the specimens that are studied in the construction of the glass models. Less than a mile away to the eastward is the Royal Garden at Pillnitz, which is the summer home of the Court of Saxony, and from which the Blaschkas were freely pro-

vided with plants from Central and South America.

In reproducing these and other plants in glass the artists worked in their studio at a large table, supplied with the most simple instruments. The products of their skill were displayed twice a year in their exhibition hall. Just before the specimens made in the previous six months were packed for transportation to this country, they were arranged in the hall, invitations were sent far and wide, and a large number of people were thus given the first view of the exquisite models in the home of their makers.

A photograph of the house, with the two artists in the foreground, may be seen in the glass case in the gallery of the main exhibition room, placed against the north wall nearest to the windows. The picture shows the dwelling to be a substantial, two and one-half story structure, with a pitch roof and dormer windows, standing with a comfortable, home-like air amidst trees and shrubbery. In the same case are two photographs of Leopold Blaschka, and one of Rudolph Blaschka. Under those of the elder artist is written, "Leopold Blaschka, born May 27, 1822; died July 3, 1895. The founder of the art of modelling specimens in glass;" and under that of the son,

“Rudolf Blaschka,¹ the sole possessor of the Blaschka processes of modelling in colored glass to illustrate Natural History. Born in Böhmisches Aicha, June 17, 1857.”

Since the death of the elder Blaschka his son has devoted all his time to the completion of the collection. The models prepared by the two artists together shortly before the father died were considered superior even to the best that they had previously sent. But Professor Goodale testifies that the last productions, made by the son alone, “exhibit the same delicacy of texture and fidelity throughout which has characterized all of the specimens that have preceded them.” The younger Blaschka regards the collection as a memorial to his father as well as to Dr. Ware. For this reason, and also because, as the artist truly says, it would be impossible to impart to any assistant the skill necessary to protect the process from turning out occasional failures, he has resolutely declined to allow others to share the traditional secrets of his marvellous technique, and, with a filial

¹ The given name of the younger Blaschka is spelled indifferently either “Rudolph” or “Rudolf” both by himself and by others. In the inscription under his picture it is written as printed, “Rudolf.” Everywhere else in this account the spelling of “Rudolph” has been followed.

devotion that every one must sympathize with and honor, insists upon completing the memorial with his own hand alone. As he is now only in his forty-first year and comes of a long-lived ancestry, his laudable ambition seems likely to be fully realized, especially as he brings to its fulfilment not only inherited technical skill and deep love for his father's memory, but keen artistic enthusiasm and scientific knowledge of a high order.

Thus the Ware Collection bids fair to remain forever unique. For, with the exception of a vase of orchids made by the elder Blaschka for his wife, a few fruits in the Botanical Museum at Dresden, and a single spray of flowers made for Mrs. Ware and Miss Ware, there are no other models extant except those in the memorial collection at Harvard.

VII

SHIPMENTS of new specimens of the glass flowers are usually received in carefully packed cases in February and August of each year. As soon as these additions arrive, they are unpacked and placed with the other models in the exhibition room. Here visitors may examine two interesting examples of the extremely careful way in which the models are packed so that they shall run no risk of being broken during their long journey from Hosterwitz to Cambridge by way of Hamburg and New York.

An inspection of these specimen boxes shows that the model is first securely fastened by delicate wires to a piece of heavy pasteboard, which is then laid at the bottom of a strong pasteboard box and held firmly in place by small, triangular pieces of cork glued in position. A quantity of soft tissue paper is next wrapped round the model and laid over it, and the box cover is then fastened on.¹

¹ For shipment the pasteboard boxes are placed in a strong wooden case, which is embalmed in straw and

Of the two examples of the packing that are exhibited, one, containing a spray of clematis with its dainty, green-white blossoms, has been left almost exactly as it was when opened, — “To show,” as the card beside it reads, “how the glass models are packed by the artists in Germany for transportation to America.” All the loose paper has been removed from the other box and placed in a good-sized pile at its head, thus allowing the visitor to see exactly how, “for transportation,” to quote from the card, “the glass models are packed in thin crushed paper, as shown in this specimen box.” Visitors who may not be inclined to express the proper degree of surprise and wonder at the remarkable exhibit before them are given a jog by the inscription on the card beside the pile of paper taken out of the box, “All this paper was placed around this model.”

At present the Ware Collection is only provisionally arranged and labelled; but each plant has been put in its proper position in the natural system. The models in the hallway show the relations of plants to their surroundings; the sprays in the main

then enveloped in coarse sacking. This and other particulars may be found in the comprehensive article on “The Blaschka Flower Models” in the *Popular Science Monthly* for March, 1897.

exhibition room show the relations of plants to each other; and the specimens in the economic room show the relations of plants to man. The nomenclature for the most part is conservative, the scientific and common names and the range being given, and, when necessary, the fact of cultivation. The object has been to keep the collection symmetrical, so that visitors may gain from it a synoptic view. The artists faithfully co-operated in this plan at every step, in some cases waiving their own preferences, as, for instance, in the construction of Central American orchids, which lend themselves most admirably to this method of representation. But this self-denial has not been without its compensations, as the visitor can well understand when looking at such exquisite creations as the drooping, bell-like, mottled yellow blossoms of the meadow lily, or the fragile pink-and-gold flowers of the wild rose, or the many-petaled magnificence of the large creamy bloom of the blue-stemmed cereus.

Not the least attractive charm of the collection is its poetical suggestiveness. One is constantly coming across specimens that are reminiscent of some strain in a familiar poet. Here, for instance, is Longfellow's

“ Beautiful lily, dwelling by still rivers,
 Or solitary mere, . . .
 — Iris, fair among the fairest,
 Who, armed with golden rod
 And winged with the celestial azure, bearest
 The message of some God.”

Here also is the gentian of Bryant with its
 “sweet and quiet eye,”

“ Blue — blue — as if the sky let fall
 A flower from its cerulean wall.”

There is Whittier's “trailing spring flower tinted like a shell,” the “lonely” arbutus that “makes the sad earth happier for its bloom.” In this case are clustered the “fair phantoms in the sun,” “the bluebells of New England,” of which Thomas Bailey Aldrich has so sweetly sung; and in that case “the orphan of summer,” “the bright chrysanthemum” of Oliver Wendell Holmes, displays “its radiant disks;” while over there the “rival of the rose,” “the fresh Rhodora” of Emerson, is blooming in fadeless loveliness to convince us

“ that if eyes were made for seeing,
 Then beauty is its own excuse for being.”

Visitors of a more practical turn of mind, to whom this literary side of the collection does not appeal, will find much to interest them in the specimens shown in the eco-

nomie room adjoining that in which most of the glass flowers are displayed. The models to be found there, which were transferred from the main collection with the consent of Mrs. Ware and Miss Ware, illustrate with the effect of reality the exhibits of plants that yield useful products.

Here are beautiful models of the flax, cotton, tobacco, coffee, and chocolate plants, the tea plant with its dark green leaves and pure white, golden-chaliced blossoms, and the cornstalk with its graceful tasselled head and ripening ear in its green husk, from the end of which the slender tuft of corn silk is hanging. With the model of the flax plant are shown fibres from Russia, Siberia, Ireland, Germany, and other places, and samples of jute belonging to the linden family, and of ramie from China and India belonging to the nettle family; while all kinds of rope and hemp are displayed, — the manila from the banana family, the pita or agave, the pineapple fibre, of which the most delicate handkerchiefs have been woven, vegetable wool, and others. With the glass specimen of the cotton plant are to be seen cotton balls and samples of different grades of cotton from our Southern States, and from Peru, Brazil, the Sea Islands, Greece, Egypt,

and elsewhere. Models of the fruit of the chocolate plant, as well as of the plant itself, are shown, together with samples of the different kinds of chocolate and cocoa that are made from it. The pods containing the beans are preserved in jars; and a note states the fact that the flowers and fruit grow from the old wood, not from the young twigs. All kinds of tea and coffee are shown with the glass models of the plants. One of the most remarkable of these exhibits is labelled, "Roasted *Java* coffee from Brazil;" while another reads, "Coffee beans made from wheat flour."

It is apparent that the collection appeals with unexpected variety to many tastes, — to the desire for novelty as well as to that for mere sight-seeing; to the delight in beauty not less than to the devotion to science; to the love for the poetical at least as much as to the leaning toward the practical. Children are open-voiced in their pleasure as they examine the exquisite sprays; and older visitors derive pleasure not only from the outspoken delight of the young people, but from the reminiscences of their own childhood that come back to them as they catch sight of the star-grass and sweet fern, and liverwort and harebells, and violets and cowslips and buttercups that they used to find in the fields, and the Star

of Bethlehem and milk-weed, and catalpa blossoms and Bouncing Bet, and pokeweed and leather-leaf and sumach that they used to gather by the roadside and arrange in huge posies on their holiday rambles. Here are the star-like flowerets of the rue-anemone that we searched for in the woods when we were young; and there are portulacca and verbena and saxifrage and bush honeysuckle, and the purple blossoms of the potato and blue flowers of the common pea to remind us of the old-fashioned gardens where we once wandered on early summer mornings in bygone years, while the bright sun drank up the dew, and the homely scent of the box that bordered the paths stole by us in tantalizing whiffs on the fresh, exhilarating air; while even these nasturtiums and begonias and pimpernels and oxalis and azalea recall to us the sunny, winter window-gardens, always in full bloom, that used to be tended with such loving, anxious care.

This fascinating and unmatchable collection was formally presented to Harvard, on April 17, 1893, by Professor Goodale, speaking for Mrs. Ware and Miss Ware, and was accepted by President Eliot for the University. The plan as a whole includes the illustration of all the more important types of American phænogamia, so

that, when completed, the collection will be an exhaustive reproduction in enduring form of the most noteworthy flowering plants and floral structures of North, Central, and South America.









PK
79

H34

**THE LIBRARY
UNIVERSITY OF CALIFORNIA
Santa Barbara**

**THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW.**

UC SOUTHERN REGIONAL LIBRARY FACILITY



B 000 009 665 1

