

## THE PLANT - MAN - THE ENVIRONMENT

By Rhea R. McCandliss

Man's early interest in plants was centered on their healing properties, and many of our earliest horticulturists were physicians who sought to grow plants of medicinal value. "An example of this early trend was the Oxford University Botanic Garden, the first of its kind. It was established in 1621 -- primarily to strengthen the faculty of medicine." (1). In the 20th century we are still concerned about the healing properties of plants. Rene Dubois, a bacteriologist, has said, "The physician could not deal with the problems of disease if he did not concern himself with the integrated reactions of man to environmental forces. He would have little chance to help his patient if he did not try to comprehend the effects of the total environment on the human condition." (2).

I think that the motto of our Horticultural Therapy unit might well be, The Plant - Man - The Environment which was the motto of the XVII International Horticultural Congress which I attended last year.

I was impressed that these plant scientists from around the world were concerned not only with plants, but with the relationship between the plant world and man. They too were interested in environmental health. Again at this year's Congress almost every speaker mentioned such phrases as "Horticulture is working with the basics of life". They were concerned with air pollution and its affect not only on plants, but that the excessive danger to plants would effect the atmosphere we breath, since plants release much of the oxygen needed by man.

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Articles expressing concern for the quality of the environment and its effect on health are appearing in many periodicals. Scientists, especially those working with plant life, are increasingly studying the disturbance of the natural ecological systems and the effect of these disturbances on man.

The importance of natural beauty and plants to man's mental health is inescapable as concrete jungles and industrial wastes encroach on our shrinking areas of natural beauty. The therapy of the green leaf is rapidly being lost. One scientist states that:

Nutritionists have established our daily minimum requirements for vitamins and minerals. But what is the minimum human requirement for contact with nature? For the peace and solitude of a garden? For the relaxation of a walk through the park? These things cannot be weighed on a balance. It has been said: 'The maturity of a community may be measured by the quality of its gardens.' (3)

Can horticulture be called therapeutic? How do we justify it as one of the adjunctive therapies here at the Menninger Foundation? To me it seems obvious, that unless we have a broad understanding of the plant world we cannot provide the patient with an awareness of the environment in which he must live. He cannot understand one plant unless he can understand the relationship of that plant to other plants, and the life processes to which not only that plant but he himself is related. If better mental health includes being concerned about the world around us, then a part of improving the health of our patients should include an understanding of the ecological systems and our place in them and responsibilities toward them.

From this viewpoint perhaps it will not sound strange to you when I say that I do not think of the greenhouse as a place where we teach people to grow plants. To me that is quite incidental to the benefit patients should get from having spent some time there while in the hospital. If a patient needs only to learn to grow plants, he could read a book or join a garden club or attend a class. And he would find it much cheaper and less painful than coming into the hospital. Or if his goal is a beautiful garden he could hire a landscape architect to plan and produce it, and labor to maintain it.

If our goals are not to develop gardeners, what are they?

We hope that a patient's working in a group, learning to adjust to and consider others; learning to be responsible for living plants dependent upon him; learning and understanding his dependency on nature and plant life; developing a greater appreciation and enjoyment in the plant world which surrounds him, no matter where he may live; being able to accept the disappointments that inevitably come when working with living perishable materials; developing a tolerance to the frustrations of a partnership with nature (and thus to other disappointments) -- we hope that these things are therapeutic.

#### HISTORY OF THERAPEUTIC HORTICULTURE

The cultivation of plants as an adjunctive treatment of illness is not new. To quote from a Cornell Plantations Bulletin, "Ever since the first admonition to 'dig and delve' people have been practicing garden therapy as preventive medicine. Before the science of psychiatry, physicians prescribed work in the garden for ills of the mind and nervous system." (4).

usually providing greenhouse as well as outside facilities. Often this establishes a good tie with community activities through the patients' participation in flower shows and other community projects.

#### GARDEN THERAPY AT THE MENNINGER FOUNDATION

I think garden therapy at the Menninger Foundation must have started when Dr. C. F. Menninger first walked, and invited patients to accompany him, around the area that has become East Campus. Very soon these walks developed into a regularly assigned part of the therapy program. The Garden Club met once a week on Wednesday afternoon from two until four. Dr. C. F. taught the patients how to identify plants and to use the botanical as well as the common names. He expected them to take more than a casual interest and to be ready to answer questions about previous sessions. When he could not be there he saw to it that someone else took the class.

I have tried to find notes he may have written about these groups (I am sure he made them). Perhaps they are buried in individual patient's records. I have found about two dozen sets of notes, together with slides, on various lectures he gave on roses, lilies, herbs, peonies, trees and many other subjects. His fine horticultural library is now in the Tower Building library and we can borrow from it for our class work.

A book The History of Gardening from this library which we have been reading recently is practically a history of the development of medicine, for it goes back into the history of the culture of the Greeks, Romans and Oriental countries, and the history of gardening and the history of medicine were closely associated in those days.

Dr. C. F.'s philosophy about gardening is expressed in an article which appeared in the May, 1942, Bulletin of the Menninger Clinic. He writes:

Peonies are very healthy flowers; they have no aches and pains, they make no outcry and there are no anxious and troubled faces to comfort. They just grow and bloom. That is why I fell more and more in love with them. They have helped me to keep my emotional and intellectual equilibrium. Growing peonies has helped me to satisfy an inborn curiosity to watch things grow. There is a gratification of the sense of sight in color and color combinations, of the sense of smell in perfumes and odors, and to that inner aesthetic sense of beauty and charm that has, I believe, made a better physician of me. My whole nature was improved, my horizons widened, and my appreciation increased in a way that aided me in my vocation. Hope never dies in a real gardener's heart. Thousands of scientists have chosen horticulture as a hobby and are the better for it too. (9).

The North Vegetable Garden, an important part of the history of group garden activity at the C. F. Menninger Hospital was started about 1950. At that time the plot was much larger than it is today. There were often 60 or more patients working there during the project hour at 8:30 in the morning. At the time of the 1951 flood in Topeka all of the products from this garden were sent to the City Auditorium, by the truck load, to help in feeding flood victims. Just as last year after the tornado, all vegetables were given to the emergency kitchens which fed volunteer workers.

This summer, as usual, the garden has been supplying tomatoes for the dining rooms of both the adult and children's hospitals, as well as sending many boxes to the several youth homes in Topeka, along with carrots and lettuce and green peppers and other vegetables. The North Garden has been traditionally a responsibility of the Project Group requiring only minimal supervision from the greenhouse, although some of those assigned to the greenhouse process the products ready for the kitchens and deliver them throughout town.

Back in 1957 Dr. Will and Mr. J. F. (Red) Pratt in an article "The Therapy of Gardening", published in Popular Gardening, elaborated our rationale for gardening. They wrote:

As a quieter of anxiety and release of tension, gardening serves to relieve symptoms. It offers social opportunities to the individual. Gardening serves different purposes for different patients. For many it is a new experience, and an educational opportunity. And as they share the product of the work with people less fortunate economically, patients picture themselves, often for the first time, as productive members of society. For others the garden club becomes a way of learning to know and work with others.

As therapy, however, gardening is never the end-all; it is one activity in a milieu designed to interest the patient and provide means of expression, thus aiding the solution of his problems.

Gardening is useful not only as a treatment but also as an excellent preventive of mental ill health. As a hobby it helps millions of people enjoy a more satisfying life and gives them a fuller interest in the world about them. (10).

In the ensuing ten years our philosophy of the purpose of garden therapy has changed little from that expressed in their article.

In 1967 twenty million people enjoy gardening as a hobby -- more than the combined number of fishermen, hunters and boat enthusiasts.

A definition of garden therapy should describe not only what happens in the greenhouse and garden groups, but why it is considered therapeutic. Is just working in a garden therapeutic?

If so, we could just provide small plots of ground and a few tools and assign these to individual patients, instructing them to, "Go plant something." I doubt that this would be either therapeutic or result in a garden. Doctors have said, "Working in the soil satisfies a primitive urge." But I have found that most primitive needs require more than soil for satisfaction. No one has yet isolated that magic substance called motivation -- and made it available to others. We can only try to inspire others to have it. Sometimes we succeed. Last week a patient bidding me good-bye said, "You teach us so much more than just about plants. You help us to have a zest for life."

Years ago at the VA Hospital we were given prescriptions from the doctors as to the type of work they wanted their patients to do. We made a list of jobs to fit the need of each type of work. Our list included 37 different individual projects and an equal number of group projects. These were further broken down into Creative Activities, Aggressive Activities (both inside and out-of-doors), Passive Activities, and those with Exhibitionistic values, Narcissistic Gratification and Compulsive, Competitive, and Socializing values. For each of these we had specific tasks which could be assigned. Now the Adjunctive Therapy Section Representative works with the doctor in helping to decide the type of work or project which will accomplish the goals set for the patient by the doctor.

In gardening therapy we try to combine the patient's needs with the needs of the greenhouse operation. The patients scheduled here are expected to participate in whatever assignment they are given, on the basis of what needs doing at that particular season, for the general maintenance and production of the greenhouse and gardens. Therefore, the assignment to the greenhouse is considered as Industrial and Service Project activity, where patients not only learn to grow plants but where they also learn to work with others for a common benefit -- to do the less pleasant, as well as the pleasant jobs, and to cooperate in an unselfish cause. But if coming to the greenhouse were just a work project I doubt if there would be a continuous waiting list to get in.

We also try to teach that there is enough fun and satisfaction in gardening that it ceases to become work, and instead becomes a new knowledge to further investigate after leaving the hospital, or a new hobby for opening opportunities for improving family and community relationships, through interest in the plant world.

In the greenhouse and garden activity we have a situation, and environment, differing in several aspects from other Adjunctive Therapy areas, and yet we also incorporate many of the others. There are opportunities to be in a group without being as competitive as is the case with sports. Here the goals and participation do not always immediately result in a win or lose situation. The results are often of a long term nature. But there are always consequences, either good or bad, depending upon how one has worked with nature.

The greenhouse provides our base of operations. For years the only greenhouse was the small one attached to the canteen building, although only a few persons can work comfortably there at one time. We use it now mainly as a propagating house. Our present greenhouse, which is much larger, was

built in 1960 when the program was expanded to include a full-time horticultural therapist and an all day program.

#### GARDENING PROJECTS

While it is possible under certain conditions for patients to have individual projects in growing plants, the overall products are for the benefit of the hospital as a whole; that is, flowers and plants grown are for use in the buildings and activities, or for outside in the gardens for beautification of the grounds.

There are several reasons for so few individual projects in the greenhouse and one is that patients, though assigned to a daily schedule, just can't always get there every day since testing and other therapeutic needs (plus the beauty parlor) sometimes interfere. If a patient has an individual plant project which does require daily attention, then the project suffers. One just can't leave a plant alone like a picture on an easel. Another reason for not having too many individual projects is the fact that they sometimes take up considerable space, and there would be room for only half as many patients if each one had plants growing on his own bench space which, of course, could not be used by anyone else, as can be done in other activities where the project is folded up and put away in a drawer or set in a cabinet. A third reason for not having individual projects is that we are producing plants and flowers for the beautification of the hospital grounds and there would not be room to do this if the benches were full of special projects.

The East Campus landscaping includes 20 flower beds the plants for which are grown in the greenhouse, sometimes from seeds, sometimes from cuttings.

The greenhouse group prepares the beds, sets out the plants, waters and weeds them. Now they are replacing the annual flowers with chrysanthemums for fall display. These chrysanthemums, 1800 of them, which were planted in pots early last spring, have been watered, fertilized, pruned and cared for all summer by various greenhouse groups. We also grow tomato plants and peppers needed for the North Vegetable Garden.

At the suggestion of a member of one of the groups an Herb Garden was started this past spring. It is North of East Hospital office. The herb salad dressing on the condiment table in the dining room is disappearing at the rate of a bottle full a day. (Do you think we should patent our recipe?)

Recently we went out to a hay meadow to gather seed pods for dry arrangements. From the enthusiasm of the group you would have thought we had provided a lavish entertainment. Everyone seemed to come alive. One patient, who a few months ago had informed me he couldn't care less about anything we did, climbed back on the bus and remarked, "With all those different kinds of plants out there, do you suppose there are some that haven't been identified by anyone yet?" Now he is enrolled at Washburn University in a Botany class, and has a special project growing plants under light in the greenhouse coming in daily between classes.

While we garden in the greenhouse in winter, we are usually growing house plants so that the various methods of propagation and maintenance are learned first hand. Almost every home has a few house plants. Here experience helps to answer questions about their care.

At times of the year, usually mid-winter or mid-summer, we find time for group reading from our library of garden books. Not all the books are "how to" though we try to have enough of these that we can find the answer

to any questions. Some of our books are intended to awake curiosity, or to impress some "sophisticated" patient with the fact that some of the greatest intellectuals of history have found in plants much to study and to enjoy and to write about.

Already we are gathering pine cones for our Christmas decorations. One group has taken cuttings from the poinsettia plants we saved after Christmas last year. These cuttings which have been rooted, then potted, fill a bench in the small greenhouse. We expect to have about 100 healthy plants growing for this Christmas.

Planting and gardening are not all we do. We read aloud from the book Botany for Gardeners because it tells in an interesting manner just what does go on when we plant a seed, and how a plant uses moisture and food. During coffee break of the morning group, we have studied many aspects of horticulture, including current literature on conservation, ecology, and related subjects.

There are creative aspects to greenhouse work. Certainly the beautiful pictures of pressed flowers and the Christmas decorations and the floral arrangements could be called artistic creations.

Sometimes a group of younger patients who are sure it will be a long time, if ever, before they do any gardening at home, do get a surprise when they find out the detail involved in creating a corsage. They announce that they certainly understand why corsages "don't come cheap". For in addition to growing flowers we learn how to use them in arrangements and in corsages, just for the satisfaction of creating something lovely to look at, or to wear to the dance, or to proudly give to a visiting mother or wife.

Because what we create in the greenhouse is living and growing, nothing we do is static. Sometimes planting seedlings in the spring is repetitious as far as technique is concerned. But watching the little plants grow into larger plants and then having the gratification of seeing them bloom prevents any monotony.

We have to consider, well maybe I should say contend, with the weather as well as with soil conditions, and other variable uncontrollable factors. No two days are ever exactly the same in any week, month or year. For we follow the cycle of the seasons in the type of work we are doing.

Perhaps most variable of all is the group of patients, for ahead of needs of the plants and the adjustments necessary to the elements, we must think of and plan how we can meet the patients' needs as interpreted to us by their doctors.

The character of our groups varies from time to time. Sometimes the individuals are all home-owners, with an interest in landscape design principles, and maintenance of grounds.

When a patient first arrives, it is standard procedure for him to say that he does not have a green thumb. It is my standard answer that after he has been working here his thumb will gradually get a dirty color and then will change to green.

When patients first come to the greenhouse they come in saying, "What do you want me to do today?" Sometimes they say this for a long time. But when the day comes that they say, "How about doing this or that today?", or "Could we plant those petunias today, and don't you think we ought to transplant those geraniums, or someone says shall we go ahead taking cuttings for the flower boxes?", then I know that they are beginning to think of the greenhouse as theirs, and learning to take responsibility for what needs to be done, and are getting past the stage where they expect us to do all the thinking for them.

When such suggestions start to come, if at all possible, I agree to the suggestion. When I see a woman go and get a watering can and water the house-plants in the shop, instead of being indifferent to their neglect, I think she is getting better and is ready to take a little more responsibility.

Sometimes patients come and say, "Have you any broken pottery I can pound to pieces today, or a weed patch I can chop out, or something to keep me from exploding?" Then I know they are learning that there are ways to relieve tension that are constructively destructive.

Because there is a good deal of heavy work connected with the greenhouse, I sometimes worry because we keep the men patients so busy mixing soil and wheeling sand that they don't get to learn enough about the planting and care of plants, or to do the fun things. So when a man watching a woman arrange flowers says, "I bet I could do that," I don't say that is for women to do. I say, "Some of the best florist designers are men. Go ahead and try it." And sometimes they do a better job than the woman was doing.

#### Case Histories

I would like to mention a few patients who have found the greenhouse experience a key to new interests outside of the hospital.

Patient A had a sudden severe break and came into the hospital very hyper-active. We were just moving into the new greenhouse and I had plenty of jobs on which he could vent his excess energy. He was a man accustomed to "getting things done," and I was most grateful for the efficient way he helped -- since I was the only staff assigned to the greenhouse. I was so busy getting the new program organized and collecting items with which to operate, that I am sure I did not give him the attention I would today; nevertheless, he became quite interested in the greenhouse activity.

He got a great deal from the manual arts shop, too. When he went home he started a volunteer job in a local children's hospital, setting up a woodworking project. When he had that developed to the point where staff was hired to carry it on, he turned his talents to a campaign for funds to build a greenhouse for the hospital, which is now under construction. He keeps in touch with the A.T.'s here for advice and help in his work.

Patient B was a young man with a number of problems, some of which kept him quite isolated from everyone around him. When he first came to the greenhouse I asked him to keep a record from the daily temperature readings, as the extremes are quite meaningful to us in relation to plant growth and hardiness. The first thing in the morning I would hear the door open and see a streak of something dark flash past, as he rushed out to the back to read the thermometer. His extreme compulsivity meant continuous records for that winter at least. Another job which his compulsivity and desire for isolation made tolerable to him was the daily watering in the greenhouse. I found that for that spring no little seedlings would die for lack of water, nor were they flooded with a water stream of fire-hose intensity, since Mr. B. carefully changed to a fog-nozzle each time he watered them. With increasing interest in plant life he built an illuminated plant box in Manual Arts. This he kept in his room. A few months later he proudly, and shyly, presented me with a blooming African Violet plant he had grown from seed, a plant usually considered difficult to flower from seed, in a much longer time. Now he has started back to college to get his degree in "some phase of horticulture, probably to do research."

Patient C was a young woman who had for several years avoided getting involved in a therapeutic program. She was given one more chance by her

doctor to follow a new program, which included two hours a day at the greenhouse. Soon reports were that she was again missing some activities, but, she was coming regularly to the greenhouse. Why? I will quote her, "Well, you know if I missed a day those seeds I planted might come up and I would not know it, and they might need me to do something for them like give them more light or water or something." When she went home her luggage consisted of as many boxes of plants as it did of clothes.

Patient D is a woman currently hospitalized. She is spoken of as one of the more difficult patients. The greenhouse was the first activity which she attended with any sort of regularity, and in which she has been able to really take an interest. She is very much involved in all phases, plus her own projects. While her behavior at times is a problem, she occasionally lets a little of her feelings show through, and one can see that now her rebellious reactions are a facade to try to hide how much she appreciates the value of the greenhouse activity for her. Sometimes when a visitor comes, and I am busy, I let Miss D. act as hostess, and I am amazed at the horticultural knowledge she has absorbed and is able to pass on. Recently she was speculating about getting a job in a local nursery.

From time to time we get other glimpses of the effect of the greenhouse activity on patients. And I think Horticultural Therapy pays off for the therapist, too, like the time a lovely Rhododendron plant arrived from British Columbia from the patient who came in determined not to participate; or when I see the bouganvillea climbing over the greenhouse, sent back by a patient who had come in saying she "knew all about gardening before she came here" or the palms beginning to thrive because the man from Florida fed them a large dose of bone meal (taking a spoonful himself) because it is good for everything that grows.

### Conclusion

Many doctors have said to me, "Why don't you have a class to teach us what you teach the patients about gardening?" Maybe you came today thinking that is what I would tell you. I am sure you have not learned how to grow plants, because that is only a small part of what we try to teach the patients -- a part you can learn from a book, which we shall be glad to loan you. There are many things we do that have not been mentioned, like the arboretum project at West Campus, and the plants we get from the USDA for testing in this area.

I can't really tell you what we do in the greenhouse because there are never two days when we do exactly the same thing. We are controlled by the seasons as much as anyone working in the world of plants and crops. We change the overall program to meet the changes in the patient personnel of the groups, in their needs and interests, and in the current requirements of the growing plants.

What are we going to do tomorrow? I think I know what we may do, but if it rains the program may change completely and if it keeps on raining for a week, as it did last spring, we might end up with nothing at all to do, but that day has yet to come.

However it goes, we hope that what patients learn in our program can be applied to experiences in their life situations and that they go home better adjusted individuals as a result.

We hope that just walking down a street will be a more meaningful experience because they will recognize the varieties of trees they see or appreciate the work that has produced a blazing flower bed, or that they can find satisfaction in working in their own gardens, or even better, share this

with their family and friends.

Making a better mousetrap may cause the world to beat a path to your door, but growing a better rose will almost force you to go out into the world to prove it and get you involved with the world outside your door.

So, if you see the greenhouse group wandering around the campus looking up into the trees to determine just what kind of an oak that is; or sitting reading Joseph Wood Krutch's The Gardener's World; or hunched over a drawing board to plan a garden so that the combination of colors in flowers will be just right; or climbing onto a bus to visit a nursery, or greenhouse, or local private garden; or making Christmas trees for the Young <sup>in</sup> Home; washing vegetables for the orphanage; making Easter corsages for the Children's Service; or washing flower pots -- or maybe even planting plants -- don't be surprised because it is all a part of learning to live a more rewarding life with less strain and stress, and maybe just learning that to go out and hoe weeds is a good way to get over being mad as well as to have a better garden.

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