

PHIL PARVIN: Aloha. I am Phil Parvin, your Conference Chairman. It is a distinct pleasure to welcome the Western Region of the International Plant Propagators' Society to our fair island state of Hawaii. We sort of "hang loose" here in the Islands. We are rather informal and I think we fit in quite well with what I have seen of the International Plant Propagators over the years.

I would now like, first of all, to bring on our President, Stan Sorenson. Stan, would you open the meeting?

STAN SORENSON: Thank you. It is very nice to have you all here. Without further ado, we are now going to move right into the program. Phil Parvin will introduce the first speaker, Dr. William Theobald, Director of the Pacific Tropical Botanical Garden.

A TROPICAL GARDEN FOR THE NATION¹

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Over the past decade-and-a-half a little known garden has been developing in the Hawaiian Islands which is unique in its origin, mode of operation, and scope. It is the Pacific Tropical Botanical Garden; the only national, privately supported, tropical botanical garden chartered by Congress. The charter (P.O. 88-449) was granted on August 19, 1964 and gave the organization the following purposes:

- a) to establish, develop, operate, and maintain for the benefit of the people of the United States an educational and scientific center in the form of a tropical botanical garden or gardens, together with such facilities as libraries, herbaria, laboratories, and museums which are appropriate and necessary for encouraging and conducting research in basic and applied tropical botany;
- b) to foster and encourage fundamental research with respect to tropical plant life and to encourage research and study of the uses of tropical flora in agriculture, forestry, horticulture, medicine, and other sciences;
- c) to disseminate through publications and other media the knowledge acquired at the gardens relative to basic and applied tropical botany;
- d) to collect and cultivate tropical flora of every nature and origin and to preserve for the people of the United

¹ This an up-dated version of an article published in *Pacific Horticulture*, Summer 1980, entitled "The Nation's Tropical Garden".

States species of tropical plant life threatened with extinction;

- e) to provide a beneficial facility which will contribute to the education, instruction, and recreation of the people of the United States.

Since its inception the Pacific Tropical Botanical Garden has been rapidly developing with these objectives in mind and it should become one of the most important centers in the world for the study of tropical plants.

The world's tropical and subtropical vegetation covers a vast area of the globe's surface from the equator north and south to approximately the Tropic of Cancer and the Tropic of Capricorn, respectively. Within this area are over 75 percent of the earth's plant species and many scientists have estimated that there are several times the known number yet to be discovered. Up until recently most botanical research has been concerned with plants of the temperate regions and the tropics and subtropics have been sorely neglected. Yet it is in these little-known regions that we have nature's greatest floristic and functional diversity.

In the tropical regions of the world live a large number of the world's peoples and it is among them that we have some of the most rapid increases in population. This rapid population increase has been accompanied by exploitive "cut and burn" methods of agricultural land clearing and with the destruction of forests for fuel. The latter has become even more prevalent in the past nine years because of the high cost of oil and the need for these countries to reduce imports. To the local needs for land and fuel have been added the demands of countries outside the tropics, where timber and other crops do not grow as rapidly or where certain minerals available in tropical areas are not found.

These same regions of the world have provided man with innumerable plants of benefit. These have included those of nutritional and medicinal value as well as those used for such things as timber, spice and shelter. Never to be forgotten are the vast numbers of plants yet undiscovered and those whose value remains unknown or unexploited. It is true that extinction is forever and efforts must be made to study those plants no matter how limited the studies may be compared to the vastness of the undertaking.

THE GARDEN'S DEVELOPMENT

Botanists and plant scientists have long felt the need for a tropical, botanical research garden within the United States. Most of the major tropical gardens of the world were devel-

oped in former colonial territories of European nations and today difficulties of access and unstable political situations have created the need for our own national tropical garden.

Hawaii provides the ideal location for such a garden. The island chain contains a number of extremely varied habitats with distinctive rainfall and temperature patterns over small areas. Great numbers of tropical and subtropical plants from many countries of the world can be grown and there is reasonable access for scientists from all areas and especially for those from the continental United States.

During the 1950s and 60s, the dedicated efforts of a great number of individuals and organizations, in Hawaii and elsewhere, led to a Congressional Charter being granted. A private, nonprofit corporation was founded and a Board of Trustees appointed to establish the Garden's programs. The initial generous financial support of the late Robert Allerton helped to make the organization a reality and in the late 60s a site was chosen in the Lawai Valley, Kauai. On January 1, 1970, Dr. William Stewart, the Garden's first director and his wife Maria, symbolically turned the first shovelful of soil to start the Garden and on January 30, 1971, the Garden's first temporary headquarters was officially dedicated.

Today the Garden is guided by a distinguished national Board of Trustees, a series of International Scientific Advisory Committees, and a dedicated staff. Although Congressionally chartered, the Garden is privately supported through the contributions of individuals, foundations and corporations. Over 800 people are now members and the Garden needs and welcomes the help of all.

The 186 acre site of the Garden is of great natural beauty and is being developed into a center for research, education, and the living collections. The staff now operates from this headquarters complex but plans have been prepared for a greatly expanded facility on the west side of the valley. The first increment of the new complex consists of laboratories for staff and visiting scientists and is now complete. The Garden recently received a challenge grant of \$200,000 from the Kresge Foundation towards the one million needed for the completion of the second increment (Administrative offices, Library, and Herbarium) and landscaping at the site.

At present the Garden maintains two satellite gardens. Kahanu Gardens (120 acres) near Hana, Maui, is the center of ethnobotanical plants and breadfruit, coconut, and loulou palm collections. It also has on its grounds the largest ancient Hawaiian place of worship, the Piilanihale Heiau, a National Historical Landmark.

On the northern coast of Kauai there is a magnificent new satellite Garden and Preserve in the Limahuli Valley (1,000 acres). This lush area contains many newly discovered rare native Hawaiian plants and a portion of it will be developed to contain collections of ethnobotanical, economic, medicinal and other plants of interest. This site complements the Headquarters Garden at Lawai by providing ideal conditions for plants needing more moisture.

The Garden is fortunate to have the use of an office and laboratory on Oahu through the courtesy of the Department of Botany, University of Hawaii. Preserves on Maui and the island of Hawaii are maintained to conserve areas containing rare and endangered species. Hawaii has the greatest number (over 800) of acknowledged rare and endangered species of any place in the world and the Garden is ideally situated to work towards their study and preservation.

LIVING COLLECTIONS

The living collections are among the most important aspects of the Garden's development. The vast array of tropical plants to be grown will include representatives from many groups. Special collections being developed include: Plants of Nutritional Value; Plants of Ethnobotanical Interest; Plants of Medicinal Value; Rare and Endangered Species in need of Conservation; Plants of Unexploited Potential; Tropical Fruits; Spices; as well as Special Groups such as palms, erythras, gingers, breadfruit, coconut, taro, aroids, banana, vanilla and tropical ornamentals.

Seeds, cuttings or living plants of approximately 1000 species are accessioned each year. These plants come from all areas of the world and the Garden encourages plantsmen from throughout the world to send their material. All of the information concerning each accession is kept on computer records and each plant is given a number when planted at any of the Garden's sites. Records can then be kept on every plant of every species for use by any persons interested in that particular plant. Several thousand specimens have already been planted and they represent a wide range of species. A program is being developed whereby the magnificent tropical species of the genus *Erythina*, which are not cold hardy, will be hybridized with those grown on the U.S. West Coast with the object of producing new horticultural hybrids for use elsewhere.

GARDEN PROGRAMS

Research. One of the Garden's major roles is to serve as a center for the study of tropical plants. Plans have been drawn for the construction of an extensive laboratory, library, and

herbarium complex for use by staff and visiting scientists and part of this is now completed. A consortium of U.S. universities and institutions is being formed to help make the Garden a truly national center for tropical research. In view of the unique nature of the Hawaiian flora, the Garden plans to undertake the sponsorship of a new floristic study of the islands with the cooperation of scientists from throughout the world.

Education. As part of the Garden's developing role in education, several programs have been initiated which appeal to groups of all ages. A 9-month Professional Gardeners' Training Program in Tropical Botany and Horticulture is offered to post-high school students from throughout the United States and abroad. The apprentices receive two hours of daily instruction followed by six hours of paid work experience on the Garden's grounds. During the summer there are Summer Internship Programs for college and university students interested in working in a tropical garden. In addition, there are public lectures, publications of general interest, and guided tours.

Publications. The Garden has a publications program which, although primarily oriented towards the scientist, also contains items of general interest. These include: *Allertonia*, A Series of Occasional Papers; *The Flora of Fiji*; a new edition of *Hawaii: A Natural History*, by Dr. Sherwin Carlquist; A Memoir Series; *Rock's Indigenous Trees of the Hawaiian Islands*; *Coastal Flowers of the Pacific Islands*, by Dr. Arthur Whistler; and pamphlets on various subjects.

Na Lima Kokua (Helping Hands). A volunteer organization serves as an integral and vital part of the Garden's operations. These dedicated individuals give freely of their time as tour guides, hosts and hostesses, and Garden helpers. Their annual plant sale is a major island event. In addition they have published a series of recipe books (breadfruit, taro and coconut) and have printed and prepared various types of notepaper.

ALLERTON GARDENS

No discussion of the Pacific Tropical Botanical Garden would be complete without mention of these gardens. The Allertons' private 100-acre estate at Lawai-Kai is a tropical garden of great beauty and tranquility. It was started by Queen Emma, wife of Kamahameha IV, in the 1870s and has been greatly expanded over the past 40 years by the late Robert Allerton and his son John. The grounds contain numerous plants of interest, outstanding examples of garden design, and Queen Emma's original summer cottage. Higher up the Lawai Valley behind the Pacific Tropical Botanical Garden there is

an additional garden area known as Three Springs. Both Lawai-Kai and the latter will one day become part of the Pacific Tropical Botanical Gardens.

When joined with the Allerton Gardens the Pacific Garden will consist of some 450 acres, with the main area devoted to research and education and the Allerton Gardens to beauty and garden design. In order to preserve the bay, research studies will also include marine plants. The Garden will then extend from below sea level through the Lawai Valley back for over 1½ miles. It will truly become a great garden for a great nation.

A HISTORY OF IPPS MEMBER SHARING

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For the benefit of the guests in the audience this morning, the motto of the IPPS is "To Seek and To Share", and all members adhere to this creed. In discussing any topic, the origin is always quite fascinating. When one reviews the Proceedings of the first Plant Propagators' Society, held on November 8-9, 1951, in Cleveland, Ohio, there are some interesting words presented by several important people relative to the formation of our Society. Words which the late Ed Scanlon wrote are certainly appropriate today. I particularly enjoyed one sentence in his opening statement, "no man should ever entertain the thought that he is omnipotent". This, of course, was one man's view of the interchange of ideas which has made this Society the success that it is today.

Several people showed a tremendous amount of foresight in those early years of the 1950's. For example, the committee which was appointed to draw up the Constitution and By-Laws, consisted of three scientists, three nurserymen, and three active plant propagators. With us today at this meeting is a gentleman who was appointed to that committee; he is none other than our illustrious International Secretary-Treasurer, William Snyder. Bill Snyder, in 1951 through today, has certainly shared with all IPPS members.

Another gentleman, well known to all of us, was extremely active in not only the philosophy of the Eastern Region but later instrumental in the regional and chapter development which we have today. That gentleman was the first speaker of the formal program on November 8, 1951, speaking on the