

The site on the Mall east of the National Air and Space Museum which was the subject of the legislation signed by the President.

THE SMITHSONIAN TORCH

Smithsonian Institution, Washington, D.C.

September 1975

Solar Energy Society Presents Abbot Award to Klein of RBL

Dr. William H. Klein, Smithsonian photobiologist who is Director of the Smithsonian's Radiation Biology Laboratory and also newly-installed president of the International Solar Energy Society, was presented the ISES American Section's first Charles Greeley Abbot Award at the Society's 1975 International Solar Energy Congress and Exposition.

The award was presented at an ISES banquet July 30 on the campus of the University of California at Los Angeles by Dr. Walter Shropshire, Jr., chairman of the American Section and Assistant Director of RBL. Dr. Klein was cited for his contributions to research in the measurement of solar energy and to promotion of the ISES American Section.

The award memorializes Dr. Charles G. Abbot, former Smithsonian Secretary who



Dr. Klein

was a pioneer solar radiation researcher and inventor of solar devices. In 1929 he founded the Division of Radiation and Organisms of the Smithsonian Astrophysical Observatory to measure the effects of sunlight on plants and animals. In 1965, the Division became the Radiation Biology Laboratory. Dr. Abbot's patents for harnessing the sun's energy included one for a solar cooker granted in 1972 when he was 100 years old. In studies extending over 75 years Dr. Abbot sought to measure variations in the sun's constant flow of energy in an effort to discover, if solar variation was found, what effect it produces on weather and climate. He was actively interested in the International Solar Energy Society, and addressed the 1971 Biennial Congress at Goddard Space Flight Center.

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President Signs Legislation Reserving Mall Site for SI

President Ford signed on August 9 legislation approved by the 94th Congress reserving for Smithsonian public purposes a site on the Mall just east of the new National Air and Space Museum building.

The legislation states that the portion of the Mall bounded by Third Street, Maryland Avenue, Fourth Street and Jefferson Drive is reserved as a site for the future public uses of the Smithsonian.

It also states that the Smithsonian "may not make any use" of the site unless such "use is first approved by the Congress."

The site, which is owned by the Federal Government, is near the United States Botanic Garden. It presently is used for outdoor sports activities.

In a statement May 1 before the Subcommittee on Library and Memorials, Committee on House Administration, Smithsonian Secretary Ripley urged the Congress to reserve the site for Smithsonian public purposes so that, at some future date, the Institution can complete its complex of Mall activities for public education and enjoyment.

Mr. Ripley noted that the Smithsonian's Board of Regents had approved, on Nov. 5, 1969, a proposal to reserve the last site on the Mall. Legislation similar to that recently approved was initially introduced in Congress on Dec. 4, 1969. Mr. Ripley pointed out that the legislation had the endorsement of both the National Capital Planning Commission and the Department of the Interior.

Secretary's Statement

In his statement, Mr. Ripley also said: "The Smithsonian, since its inception in 1846, has served the nation through museums and exhibits devoted to public enlightenment, enjoyment and education. As one of the world's leading research and cultural centers, we have directed our efforts to presenting and interpreting in a meaningful fashion accomplishments in science, history and art to the millions of people who visit our halls and galleries each year.

"At the Mall facilities these visitations are currently running about 15 million per year. By comparison, in the late 1940s we were recording annually two to three million visitors. Since shortly after the end of World War II about 220 million people of all nationalities and cultural origins have passed through our Mall museums.

"This is indeed a large audience, and I cannot predict with any degree of certainty, nor would I wish to, that the number of people coming to the Mall to enjoy and to learn will stabilize or reduce. Rather the opposite trend seems to be occurring and will most likely continue to occur, in spite of energy shortages.

"People have increasing amounts of leisure time, and a persistent inquisitiveness about the history of this country, of science, of the arts, and, perhaps most basic of all, about the roots and condition of man.

"With respect to the possible public use of

the site, it will be a long time before we decide upon a building or indeed whether a building should be constructed there at all. As we look beyond our Bicentennial observances toward the twenty-first century, we can make one certain prediction: that the human condition and particularly the relation of man to the natural life support systems that provide him with the means of existence, such as food, energy, air and water, will undergo necessary and stringent change.

"The plant genetics which have evolved the grains, fruits and legumes of today, the continuing development of so-called 'miracle' strains of food plants, their vulnerability to possible climatic change and chemical shortages, the potential and risks in future development of marine and freshwater organisms for life support, the present and future roles of fossil fuels and of solar radiation in satisfying needs for food and energy — these are only a few of the themes which now are of serious concern to scientists and policy-makers, and subjects of intense interest to millions of the public here and abroad.

"Many of these themes are historically important in Smithsonian research. It has been very difficult to present them in the form of exhibitions within the traditional confines of museum halls. They virtually demand outdoor spaces where living plants, sun, water and air can demonstrate the principles and problems involved.

"Accordingly, we plan to use this last site on the Mall, easily accessible to millions of

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Japan, SI Join In Special Exhibit

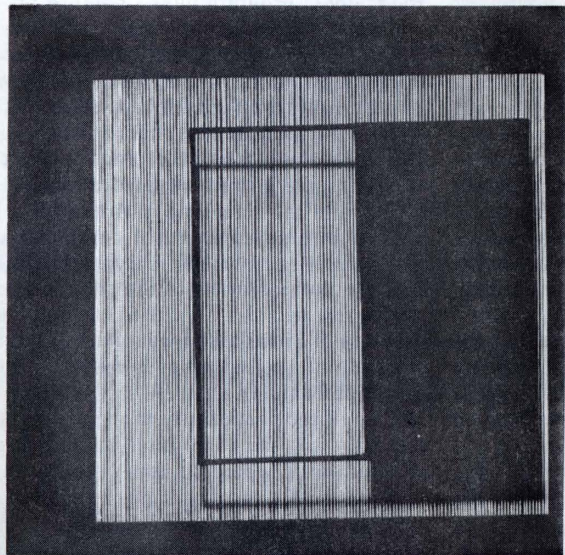
The Japanese Government, in cooperation with the Smithsonian Institution, will hold an exhibition of art treasures from the imperial collections in the Great Hall of the Smithsonian Institution Building September 18 to October 5.

The exhibition is being held in conjunction with the visit next month to the United States of the Emperor and Empress of Japan. From October 12 to 29 the exhibit will be shown at the Japan House in New York.

The exhibition includes masterpieces of paintings, calligraphy and crafts from the Momoyama period (16th Century) to the early Showa period (19th Century).

It consists of 40 pieces selected mainly from the imperial collections, but also from the collections of the Takamatsunomiya family, the Agency for Cultural Affairs, and the Tokyo National Museum, as well as paintings by the Empress.

New Fall Exhibitions at Smithsonian Museums (See Page 2)



Soto exhibition at the Hirshhorn.



American sculpture at NCFA.



Photographic silk screen prints at NMHT.

Graduation Ceremonies Held For First SI Guard Dog Unit

"One of the finest bits of news to emanate from the castle building in recent months was the item that the Smithsonian was going to the dogs," remarked Richard L. Ault, Director of Support Activities, as the first class of the Smithsonian Canine Unit was graduated in a ceremony held at the canine training grounds at Andrews Air Force Base on July 25.

"It was such good news," Mr. Ault continued, "that our Secretary included it in our recent newsletter to the Chief Justice and our other Regents. In case anyone thinks this means an onset of decadence, the expression actually means just the opposite. By adding a K-9 Branch to our protection force, we have added a new dimension to the protection of our buildings, our employees, our visitors, and have established a new line of defense for some of the nation's top treasures."

A welcoming address by Robert B. Burke, Director of the Office of Protection Services, preceded a field demonstration by five of the graduating class of six officers and dogs. The ceremony ended a 14-week training course, as reported in the March issue of the *Torch*.

Sgt. Hugh W. Pitzer of the Washington Metropolitan Police K-9 Branch narrated the demonstration which included exercises in obedience and agility. An "article search" was demonstrated by Officer Phillip C. Jones and Lobo when a coin purse was hidden in the grass. The object was not visible to the dog thereby forcing him to rely on scent to locate the article.

Another exercise called the "box seek" was demonstrated by Officer Charles E. Whitehead and Brutus, and Officer Gary E. Hunt and Sabeth. When a person hides in a large cubicle, the dog must again rely on scent to determine in which box he is hidden.

Exercises in attacking were also demonstrated. Officer Walter Page commanded King to attack, then called him back, in an exercise known as "stand off and attack." The "straight attack" was demonstrated by Officer Kenneth J. Brewster and John and the "gun attack" by Officer Jones and Lobo. In each of the three attack exercises, Officer Hunt was the

"criminal" equipped with a thickly padded arm covering.

Plaques were presented to the U. S. Air Force, Andrews Air Base K-9 Section, for cooperation in providing the training grounds for the class, and to the Metropolitan Police Department, Training Division, Canine Branch, for help in obtaining the dogs and grading the dogs during tests.

The six donors of the dogs were presented certificates of appreciation: Detlef Schlesiger for John; Jean Bender for Sabeth; Carol Hanagan for Lobo; Frank A. Waigand for Roscoe; Floyd A. Hawkins for King, and Steven Dameron for Brutus.

The six canine handlers received certificates of training for completion of the course. They included Montford D. Naylor who was not present for the ceremony.

A presentation for the outstanding graduate was made by Donald J. Bartel, SI's K-9 Trainer, to Officer Brewster and John as the top team, based on the test given by the Metropolitan Police Department in the 13th week of training. Mr. Bartel also presented gifts of appreciation to M. Sgt. Jerry A. Cunningham of the Andrews A.F.B. K-9 Unit and Sergeant Pitzer for their individual assistance.

The canine teams actually were put into service on April 14 after completion of the course of training. The teams patrol SI installations on the Mall as well as the facilities at Silver Hill and 1111 N. Capitol St. between 10 p.m. and 6 a.m.

"A year or so from now," Mr. Ault commented in his remarks, "I would like to hear someone mutter, 'Those teams haven't made an arrest in a year. I don't know why they ever hired them.' When I hear this, I will know that we have reached the ultimate in crime prevention."



Dr. Ayensu visiting the Kwangtung Botanical Garden in Canton.

Dr. Ayensu, NMNH Botanist, Visits Scientists in China

About a year ago a bundle of books arrived at the Smithsonian from abroad with no indication as to the identity of the final recipient.

The package finally was forwarded to the Office of Public Affairs. The person who opened it there found three thick botanical texts that apparently came from some oriental country. He sent them to the Botany Department at the National Museum of Natural History. The following day Dr. Edward S. Ayensu, department chairman at NMNH, telephoned the Office of Public Affairs and explained the importance of the books: they were the first botanical publications on the *Flora of China* sent from the People's Republic of China in more than two decades.

As it turned out, the arrival of these volumes, published under the editorial direction of the world renowned Peking Institute of Botany, and forwarded to SI by the Academia Sinica (Chinese Academy of Sciences) helped to establish the first in a series of mutual exchanges. Dr. Ayensu subsequently presented the Academia a set of Mary Vaux Walcott's *North American Wild Flowers*, autographed by Secretary Ripley. Out of this came an invitation for Dr. Ayensu to visit the People's Republic for talks with their leading botanists.

Dr. Ayensu flew to China from Russia on July 13 after attending the 12th International Botanical Congress in Leningrad. Officials of the Chinese Academy of Sciences and the Ghana Ambassador, Richard Akwei, greeted him warmly at the airport in Peking. They gave him two hours to rest and then started him on an intensive program of tours and discussions. It was an itinerary that would not only take him to research institutions but to a number of improbable places as well, including a tractor factory, where he was invited to drive one of the finished products off the assembly line, and a commune hospital where he not only witnessed acupuncture surgery but got a taste of it himself.

SI, Wells Fargo Sponsor Contest

A \$100,000 Bicentennial awards program, sponsored by the Wells Fargo Bank, in cooperation with the Smithsonian Institution, was announced September 9 at a special press luncheon in the Museum of History and Technology.

Entitled "Toward Our Third Century," the program invites participants to submit essays of up to 3,500 words on a series of topics dealing with the needs of the next century in this nation's history.

Entries will be judged by a jury of nine distinguished Americans selected by the Smithsonian. Judging will begin on February 1, and the winners will be announced on July 4.

Employees and families of the Smithsonian and the Wells Fargo Bank are not eligible to participate.

The program was announced by Secretary Ripley and Richard P. Cooley, president of the California-based bank, who also is a member of the board of the National Associates.

S-H Center to Hold [About SI Women] Symposium on Women in Science Election Set For Council

More than 500 high school and college freshmen women are expected to attend a special symposium on science careers sponsored by the Smithsonian-Harvard Center for Astrophysics in celebration of the International Women's Year.

"Earth in the Cosmos: Space for Women" will be held in Cambridge, Mass., October 17-18, and will focus on the problems and potential for women seeking careers in astronomy, geophysics, and the space sciences.

According to the symposium organizers, Ursula Marvin of SAO and Martha Liller of the Harvard Observatory, the discussions will stress the realities of scientific careers for women: what jobs are available for women with high-school or technical educations as well as those with advanced degrees; how to plan for careers in these fields; what problems women can expect to face in a traditionally masculine community; and, most important, what special satisfactions the work of exploring the universe can provide.

Staff members of the Center as well as invited speakers from other scientific institutions will talk to the students about their own experiences in science-related careers.

In addition to scientific investigators and educators, panels of programmers, secretaries and administrators from the Center will discuss opportunities in direct support of scientific research, such as communications, library science, and project management.

All sessions will be informal and open with the intention of encouraging the young women in the audience to respond, ask questions, and express their own opinions. The proceedings of the symposium will be edited and published as a reference resource for distribution to high-school and college guidance offices.

Interested members of the Smithsonian Institution staff are invited to attend. Call Karen Motylewski at 617-495-7275 or Joanne Tondryk at 617-495-7371 for more information.

The Smithsonian Women's Council election will take place this year over a two-week period.

Each woman staff member in the Washington metropolitan area will receive a ballot through internal mail during the last week in September. She should vote for 15 of the candidates and return the sealed ballot by mail to Diane Della-Loggia, NHB Room 85.

Of those candidates who receive the highest number of votes, the first ten will become regular voting members of the Council and the next five will become alternates. The newly elected members will assume office by October 15. Their names will appear in an announcement to all employees.

Ellen M. Myette of the SI Women's Council, a member and delegate to the American Association of Museums, attended the 70th annual meeting of the AAM, June 22-26 at Los Angeles.

Susan Stitt from the museum at Stony Brook, N.Y., was elected chairperson of the Woman's Caucus. The caucus has been successful in having several of its members invited to sit on various AAM committees, such as the professional practices, accreditation, and ethics committees. Also, this year several women were elected to the AAM Council.

During the next year the caucus would like to elect representatives in each of the six AAM regions who could represent the Woman's Caucus at the annual regional meetings as well as reach those women who, for various reasons, may be unable to attend the annual AAM meeting. An issue of *Museum News*, the official publication of the AAM, will be devoted to women in museums and is scheduled to be published this fall.

For additional information call Ellen Myette, Extension 5811.

"Would you like to try it?" a barefoot doctor asked me," relates Dr. Ayensu. "And before I could say 'Jack,' two new needles were in my upper left arm. After awhile I could feel my hand get numb."

At the Peking Institute of Botany he met with taxonomists working on the *Flora of China*, a projected 80-volume work that will describe all of the more than 30,000 species of Chinese plants. His hosts allowed him to tour and photograph the Institute's labs where research is going on in ecology, paleobotany, plant physiology, cytology, morphology, biochemistry and crop ecology. (Dr. Ayensu is a skilled photographer and his camera bag was seldom off his shoulder during his 15-day visit.)

He was also given a tour of the Institute of Plant Genetics outside of Peking where research in molecular biology, genetics and anther culture is going on. The Institute's work is closely linked to agricultural production and this Dr. Ayensu found to be true of most of the botanical research in the People's Republic of China. Little or no time is being spent on esoteric research. The orientation is towards the breeding and management of food crops like wheat, rice, sorghum, maize and vegetables.

The drive to maximize the quality and quantity of agriculture output also has a determining impact on the training of scientists in China. They require only three years of education after high school, in which half the time is spent in the field and half in the labs.

"We had frank discussions about the shortcoming of an academic program of this nature as well as its strength," Dr. Ayensu said. "I quite understand this type of practice because their main preoccupation is to insure the utility of scientific research and the extent that it can serve the people. I only wish most of the developing countries will follow the Chinese program of self reliance."

From Peking Dr. Ayensu went on to Shanghai, where he visited the Institute of Physiology and saw the ongoing research on photosynthesis, cell physiology, nitrogen fixation, photohormones, microbiology and the main phytotron in the country. Most of this work was geared to improve varieties of plants and the screening of antibiotics. He viewed a large agricultural commune and was impressed by its efficiency, management and the collaboration of the scientists with the people who ran it. At the Lunghua Plant Nursery of Shanghai he was given a look at a breathtaking collection of Bonsai plants, the finest he has ever seen.

One of the particularly enjoyable parts of his trip was the three days he was in the Canton area, where he spent quite a bit of time at the Kwangtung Institute of Botany.

"I felt very much at home there, because the tropical and subtropical flora was much like that of Ghana," Dr. Ayensu said.

At the Kwangtung Institute of Botany and Kwangtung Botanical Gardens Dr. Ayensu met Professor Chen, 76, one of the leading botanical figures in China and a former visitor to Ghana. He and others of the older botanists had memories of Dr. Floyd A. McClure, world authority on bamboo who worked in the Department of Botany,

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A photograph of 'Intern '75' participants, taken on one of their field trips, includes (back row, from left) Eric Seip, James Paul, Ruth Wooten, William Umhau, Keith Mabry, Mark Houghtaling, Alexis Ward, Candace Smith, Sue Jerga; (front row, from left) Julie Hunter, Barbara Krystyniak, Barbara Long, Karen Jipson, Cheryl Homzak, Pauline Atwood. Participants not present were Karen Bond, Mary Baechtel, Sonnita Cannady, Dorothy Eason, Roscoe Holley, JoAnn Resing and Philip Stanton.

'Intern '75' Program Provides Summer Experience for Students

by Karen Bond
'Intern '75' Program Participant

This summer I was fortunate to find a summer job, but not just any job.

As part of the Smithsonian Office of Elementary and Secondary Education's "Intern '75" program, I spent eight weeks with the Education Department of the National Collection of Fine Arts doing research on Winslow Homer and other American artists and learning how a museum functions.

The program in which I took part involved 22 high school students in learning/service projects in the various Smithsonian museums over a two-month period. Installing exhibitions at the Renwick Gallery, overseeing a chicken hatchery at the Zoo, restoring artifacts at the National Museum of History and Technology, and teaching ecology to grade school children at the Chesapeake Bay Center for Environmental Studies were just a few of the projects undertaken by student interns with the help of museum curatorial and education staff members.

When the "Intern '75" program was announced by the Office of Elementary and Secondary Education last spring, more than 250 applications poured in from all over the eastern United States. Of the students chosen from this number, 13 were from the Washington metropolitan area and nine were from cities and small towns from Maine to North Carolina. Stipends and travel money were provided for each intern through a grant from the DeWitt Wallace/Reader's Digest Scholarship Fund. Along with offering a variety of work experiences, the program provided an enrichment activity once a week, planned for the particular benefit of the out-of-town students but interesting to the local students as well. A trip to Harper's Ferry, W. Va.; a walking tour of Alexandria, Va., and an "Experimentarium" program here at the National Air and Space Museum were among the most popular of these activities.

All of the interns agree that the program was one of the most meaningful kinds of experiences a student can have, and we hope that it continues to grow. Certainly, for me, it had the long-term benefit of opening my eyes to the importance of continuing my education, and the financial support it gave helped me to save for college.

May I add a warm note of thanks to the many people at the Smithsonian who helped to make "Intern '75" possible.

SI Football Squad Gets Set

The Smithsonian's football squad is limbering up for another season in the Adult Touch Football League of the D.C. Recreation Department, and coaches Bobby Garrison and Joe Bradley (of Computer Services) say "the team looks strong."

The seven-game schedule kicks off Saturday morning, October 4, but the coaches are still seeking players. Anyone interested should call them at Extension 5992 or 6455. Practices are Wednesdays at 6 p.m., at 16th and Kennedy Sts. N.W.

For the past two years the Smithsonian Seven has been a bridesmaid, but never a bride, finishing second in the strong Government Division in 1973 with a 5-1-1 record, and tying for second in 1974 with a 4-2-1 record.

This year, however, with a number of returning veterans plus several "good looking newcomers," Garrison and Bradley say the team "should be right up there with the contenders."

Returning offensive starters include quarterback Len Henley (NZP), end Les Johns (Automatic Data Processing) who with five touchdowns last year was one of Henley's favorite targets, and Garrison at blocking back.

Other offensive veterans are center Walter Hopwood (Conservation Analytical Laboratory) and lineman Edward Price (NASM).

From the defensive squad comes cornerback Dennis O'Donnell (Computer Services) and rushman Bradley.

Newcomers that Garrison and Bradley expect to beef up the team include lineman Chuck Mangane (SI Research Foundation), cornerback Phil Miller (Protection Division), rushman Mike Hollis (Duplicating) and linebacker Duane Stroud (Computer Services).

Food Facilities Remodeled at MHT

In order to increase food service capacity at the National Museum of History and Technology in the Bicentennial year, the employee and main public cafeteria and the main kitchen in that building were closed for remodeling September 8 until mid-December.

In an announcement, Richard L. Ault, Director of Support Activities, said the present facilities will be replaced with one large carousel wheel serving employees and the public hot and cold cafeteria-style meals. A separate entrance and cashier will be

provided exclusively for Smithsonian employee use. The fifth floor staff dining room also will be closed until the main supply kitchen reopens.

While remodeling is underway food service will be provided by the small carousel facility which will remain open for employees and the public, offering its regular fast-food menu plus some additional items. A special entrance will be provided for employees. The standard 20-per-cent discount on posted prices remains in effect for employees with Smithsonian identification cards.

New Fall Exhibitions at SI Museums:

Silk-Screen Prints at MHT

"Silver and Silk," an exhibition of photographic silk-screen prints is on display in the Hall of Photography of the National Museum of History and Technology.

Directed by David Haberstick, Assistant Curator in the Division of Photographic History, the exhibition provides more than 60 examples of the wide range of image-making possible through photographic silk-screen printing.

"Screen printing is a versatile, precise reproductive technique and many 'prints' which can be seen throughout this museum might in a sense, be considered part of this exhibit," Haberstick said.

"The Smithsonian is noted for the excellence of its graphic design in displays of all kinds, and most of the typography, illustrations, and graphic embellishments are reproduced and transferred to the exhibit sites by means of photo-silk-screen techniques."

The portability of screen-printing equipment and its ability to print on virtually any surface explains the reliance upon the silk screen for the museum's exhibits. The fact that a printing press is not required is the key to the emergence of silk-screen printing as a major graphic arts industry over the last several decades.

Some prints in the exhibit illustrate the medium's ability to produce color images of a quality and accuracy approaching that of the printing press. The medium is also a tool of creative expression for artists, and most of the prints shown illustrate the creative potential of the process.

Silk-screen printing in the fine arts is known as serigraphy, and photo-serigraphs — a combination of photography with silk-screen printmaking — are typical of the multi-media concept frequently found in contemporary art.

In certain cases artists employ photographs made by others within oil paintings, lithographs, serigraphs, or other media. Andy Warhol, for example, used the technique to reproduce his famous studies of Marilyn Monroe.

Most of the artists in "Silver and Silk," however are primarily photographers who print their work in colored inks rather than on conventional photographic paper. These photo-serigraphs are the product of the photographer's own eye, mind, and hand and are not "reproductions" of photographs.

Often the serigraph is the final result envisioned by a photographer when he makes the original negative in his camera, and thus is analogous to the hand-pulled photogravures made directly from original negatives by artist-photographers at the turn of the century.

The exhibition runs through December 29.

Exhibit Traces Banking History

A major Bicentennial exhibition tracing the history of American banking from colonial barter systems to contemporary electronic banking opens September 18 at the National Museum of History and Technology.

Valuable memorabilia of American banking is on loan from financial institutions and private individuals, although the bulk of the exhibition is drawn from the museum's own holdings. Many of the objects are being shown for the first time. They were selected by the NMHT curators of numismatics, Dr. Vladimir Clain-Stefanelli, and Mrs. Elvira Clain-Stefanelli. They have written a catalog for the show entitled *Two Centuries of American Banking*. The exhibition was funded by a grant from the American Bankers Association with design by Joseph Wetzel Associates of Stamford, Conn.

Located on the third floor of the Museum, the entrance to the exhibition is flanked by massive columns suggesting the monumental architecture of ancient Greece and adapted as the ultimate symbol of elegance and opulence by American banks of the past century.

The exhibition tells the story of America's involvement in banking from pre-Revolutionary days, when prices were expressed in beaver skins, through the growth of a nation demanding more and more money and credit, and coming up to the highly automated systems of today.

Works of Soto At Hirshhorn

A retrospective exhibition of the works of the Venezuelan artist Jesus Raphael Soto is on display at the Smithsonian's Hirshhorn Museum and Sculpture Garden.

It will continue through November 9.

The Soto exhibition will inaugurate the Hirshhorn's policy of presenting major loan exhibitions. Since the Museum's opening in October 1974, its entire space has been devoted to the Inaugural Exhibition of works from its own collection, an exhibition that has already drawn more than 1,500,000 visitors.

Soto, born in 1923, maintains a studio in Paris and travels frequently to Caracas. Forty-nine examples of his work are on loan for the exhibition from public and private collections in Caracas, Paris and New York, including Venezuela's newly established Museo de Arte Moderno "Jesus Soto" in the artist's native city of Ciudad Bolivar.

For nearly three decades Soto has continuously experimented with optical problems and the representation of movement in his work. His paintings in the 1950s explored the phenomenon of optical movement through the superimposition of one transparent surface over another. In the 1960s he incorporated actual movement into his art and later explored the problem of integrating the viewer into the work of art.

In 1969 Soto began a series of works known as "Penetrables." The "Penetrables" are constructions into which the observer enters, thus becoming a participant in the completion of the work. A highlight of the exhibition will be a "Penetrable" designed by Soto especially for installation during the Hirshhorn's exhibition. The construction will be 10 feet high, 35 feet wide, and 17 feet deep. It consists of 54,000 running feet of 1/4-inch clear polyethylene tubing suspended from plastic grids. Overhead lighting will reflect off the tubing creating a shimmering rainfall effect on the visitors walking through the work.

The exhibition was organized by the Solomon R. Guggenheim Museum in cooperation with the Hirshhorn Museum and Sculpture Garden and will be shown in the Museum's lower level special exhibition gallery.

Sculpture Shown at NCFA

"Sculpture: American Directions, 1945-1975," described as a selective review of important sculptural concerns and achievements during the past 30 years, will be on display October 3 through November 30 at the National Collection of Fine Arts.

The exhibition was organized by Walter Hopps, curator of 20th century painting and sculpture. It is unique in that it juxtaposes works of the early 1950s with current pieces. It represents the rich variety in materials and techniques that have been utilized by the finest American sculptors.

While this show is geared to interior museum space, it is carefully planned so that all of the 63 pieces by 54 artists are seen clearly and individually. The contradictions and multiplicity of form and approach can be felt and compared easily within this context.

The pieces range from David Smith's "Cubi XXVI" to Joseph Cornell's intimate wooden constructions. The materials range from wood, metal and stone to plexiglass, fluorescent lights and dime store objects.

In addition to those sculptors who are often shown, the exhibition deliberately includes those who are less familiar but whose accomplishments have been recognized.

A grant toward the expenses of the exhibition was provided by the Phelps Dodge Corp.

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SITES Exhibit Shows Women In Trade Unions

The Smithsonian Institution Traveling Exhibition Service is preparing a special exhibition on the role that women have played in the American labor movement.

Entitled "Workers and Allies: Female Participation in the American Trade Union Movement, 1824-1976," the show is available for local bookings.

The panel exhibition depicts women's participation from their first jobs in the New England cotton mills, through the formation of self-improvement societies, to the blossoming of full-fledged, politically powerful trade unions.

The story is told through reproductions of photographs, illustrations, newspaper accounts and memorabilia of the women, and women's organizations, that figured in the development of organized labor in this country.

Some of the major events in labor history in which women have played a central role also will be portrayed, such as the Homestead Strike of 1892, the Triangle Shirt Waist Fire of 1911, the Ludlow Massacre of 1914, the Chicago Massacre of 1937, and the founding of the Coalition of Labor Union Women in 1974.

Much of the material for "Workers and Allies" has been gathered from federal, state, municipal, union and university archives. However, local exhibiting organizations are encouraged to organize supplemental displays of local artifacts and historical materials, using the Smithsonian exhibit as a basic "information core."

Organizations that exhibit "Workers and Allies" will receive 100 copies of a 96-page book of the same title, published by the Smithsonian Institution Press, and designed to serve as a reference work on the subject for visitors.

"Workers and Allies" is being produced photographically in five duplicate copies. Bookings are available to schools, historical societies, museums, and other educational and union organizations.

Smithsonian Press Issues Book on White House China

The Smithsonian Institution Press has published the most definitive work to date on White House china, entitled *Official White House China: 1789 to the Present*.

Written by Margaret Brown Klapthor, chairman of the Department of National and Military History, the book offers an authoritative account, based on archival records, of the design and acquisition with federal funds of official tableware by the Nation's first families.

The 284-page volume, with 81 color plates and 83 black-and-white illustrations, caps a 19-year research project that began during the Eisenhower Administration.

The effort was triggered in 1956, during the renovation of the First Ladies Hall, then in the Arts & Industries Building, when Mrs. Klapthor was trying to write labels for White House china in the Smithsonian collections and found very little authenticated information available.

Mrs. Klapthor began combing through records at the Smithsonian, the White House, the National Archives and elsewhere to pinpoint the cost, design, manufacture, make up and use of White House service.

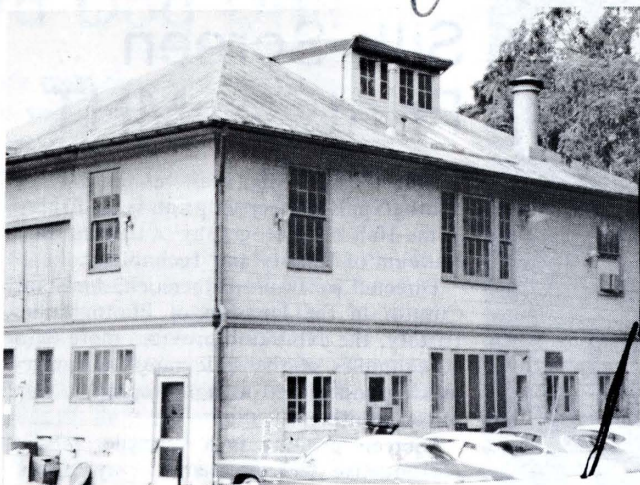
Her research also brought her into contact with such "informal" historical sources as a recently retired Washington, D.C. doctor, whose father had provided important technical assistance and advice to Mrs. Benjamin Harrison when she was designing her service.

Mrs. Klapthor, who holds a degree in American history from the University of Maryland, joined the Smithsonian staff in 1943. Her chief curatorial responsibilities are the gowns of the First Ladies, the Presidential china collection and White House and Presidential furnishings and memorabilia. She has written widely on these subjects and is considered a major authority on the White House, its families and its furnishings.

Mrs. Klapthor supervised the research and installation of "We the People," the major Bicentennial exhibition at the National Museum of History and Technology.

The new book is priced at \$15.95 and is distributed in the U.S. and Canada by George Braziller, Inc.

Memories of the Old South Shed at SI



The South Shed before it was demolished.

By Paul Edward Garber
Historian Emeritus
National Air and Space Museum

When I learned recently that the two-story wooden building south of the Smithsonian Castle is to be razed, I took the next opportunity to walk over there and stand a while thinking of the wonderful history of that venerable structure, and my recollections of previous visits there.

During my teens I often visited the Smithsonian. Two of my schoolmates were sons of a Regent. Permission was given them to visit behind the scenes of the Museum. I tagged along and sometimes would re-visit those fascinating places on my own. Thus I came to know Luther Reed who had been one of Secretary Langley's principal mechanics. He had become quite elderly and feeble but was kept on the payroll because in those days there was no retirement system and his salary was necessary for his living expenses. His shop was on the third floor of the northeast "pavilion" of the Arts and Industries Building. I would time my arrival for noon because he repaired old clocks and I liked to hear their collective striking in a tuneful variety of dings and dongs. Most of all I enjoyed his recollections of the construction, trials, and flights of Langley's "aerodromes." I recall with special pleasure, the time he took me to the South Shed.

As we entered the door on the east side, he stopped to talk with Stephen Kramer, who had worked on the Langley-Manly-Balzer engine of the large aerodrome which had twice been launched but had not flown in 1903. Afterward he was retained to make instruments for the Astrophysical Observatory. He was a superb artisan in metal. I remember particularly his use of hand-held tools for turning metal in the lathe. Those tools were triangular in section with angular points. He would hold them against the metal, taking precise cuts to bring the piece to its final perfection. The conversation of the two friends soon came around to their days with Langley, while I stood by with wide open eager ears, absorbing the stories of those historic days.

Aerodrome Shop

Turning left and climbing a long flight of stairs we came to the second floor. When the door was unlocked and swung open there was the aerodrome shop, very much as in Langley's time. (He first came to the Smithsonian in 1887. He died in 1906. My first visit to the South Shed was about 10 years after his death.) Ahead of me was the west wall. It was covered with relics of Langley's many experiments with mechanical flight. There were the body frames for several model aerodromes, each one a veritable jewel of brazed steel tubing; large propellers with cloth-covered blades for the full-scale aircraft including the pair which were modified for the trials of 1914. There was also a larger propeller that had been used to test thrust when powered and mounted on a railroad flatcar. A dozen or more smaller propellers on the wall recalled their use on the model aerodromes or in bench tests, and there were numerous airfoils which were rectangular in plan; as seen from their ends they were of various curvatures, all showing the wide range of Langley's tests. Most of the wooden propellers and airfoils were of wood and beautifully made, laminated from strips of mahogany glued together, all marvelous examples of woodworkers' skill.

I was privileged to be seeing all this in the presence of one of those craftsmen, who had worked here. Directly to my right as I stood in the doorway was a three-paneled wing, cloth-covered, made for testing the effect of superimposing surfaces in echelon. Walking into the large room I saw a brass plate in the floor. Later I learned that this was a pivot bearing for the whirling arm, at the end of which Langley had tested the airfoils and other specimens to determine their lift and air-drag at different speeds. Several workbenches were along the north side of the shop, a clock was ticking on the wall, and near it were several telegraph instruments which, I was told, had been connected to other instruments at the areas where the aircraft had been tested. A lathe and large scroll saw occupied the southwest area of the floor. Supplies of beautiful spruce and mahogany boards leaned against the wall and as I turned toward the east side of the shop I saw horizontal racks of steel tubing of different diameters, lengths, and wall thicknesses. Beneath the racks was a huge door. This had been the exit for the large panels and frames that were taken to the flight-test locations at Chapawamsic Island on the Potomac near Quantico, and later to nearer areas. My visit was limited by Mr. Reed's need to attend to other matters. I thanked him most sincerely and at my next noontime visit to his shop I took him a tasty dessert.

In the next year, 1917, America entered World War I and I joined up in the Army. After my discharge (honorable, that is) I went into the Post Office Department's Air Mail Service, and in June of 1920 began my career at the Smithsonian. I took over the shop vacated by the death of Mr. Reed. I was given a 3-month temporary appointment. (Thus far it has been extended to more than 55 years.)

I was employed in the Division of Mechanical Technology. The Curator was Carl Mitman, a graduate in mining engineering, and a kind and quietly capable administrator. My title was Preparator, one who prepares specimens for display or preserves them for storage. The salary was \$700 per year. My duties included the care of the "John Bull" and "Stourbridge Lion" locomotives, automobiles, bicycles, (I rode each one before exhibiting it, officially, to be sure that it was properly repaired, but personally for the fun of it including some bad landings from the high-wheelers), telegraph and telephone instruments, small watercraft, guns, Patent Office models of various mechanical gadgets, a large collection of electric light bulbs, scale models of numerous forms of transportation, and eight aircraft suspended from the rafters of the Arts and Industries Building. There were the Stringfellow triplane model, Lilienthal glider, three Langley model aerodromes, his large "Aerodrome A", the Wright Military Flyer, and a then-recently installed DeHavilland-4 biplane.

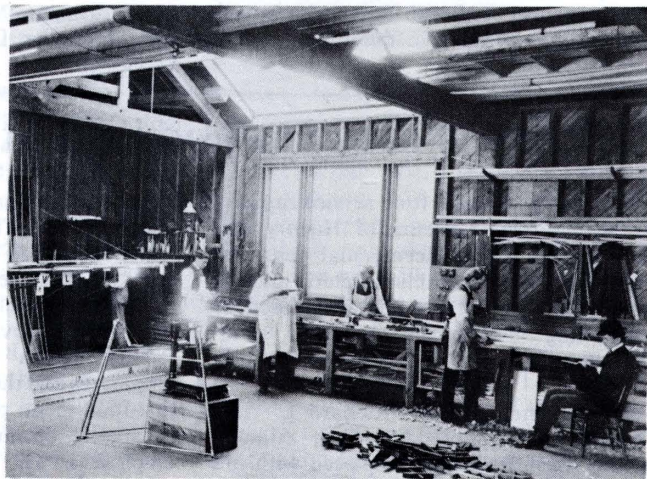
I soon made friends with other Smithsonian personnel, then totaling about 250, and I took interest in the widespread activities of our own and other departments. Thus I met Frank Cole, head of the main carpenter shop in the Natural History Building. He had worked on Langley's large aerodrome and told me proudly how he had been the one to suggest to Langley that the wings could be lighter if the ribs were hollow. On his own he had made such a rib and showed it to Langley with some trepidation, but it was approved. Mr. Cole devised a jig for forming the ribs and making all alike. His tool chest was about 4 feet long and about 30 inches square at the ends. He had made it himself with brass angles and corners, hinges and lock, which he kept at a high polish. It was a marvelous maze of shelves and trays precisely filled with the finest tools including a wide selection of wooden molding planes. When I told him of my previous visit to the South Shed with Mr. Reed, Mr. Cole said he would let me know when he would be going there so I could come along. He was one of the few who had a key to that shop.

A few days later we went over. I was pleased to see that the arrangement of fuselages, propellers, airfoils, machine tools, and benches was apparently unchanged. Mr. Cole had some work to do in an annex room so I had time to explore. I carefully and reverently fondled several of the small wooden propellers, about 30" in diameter, marveling at the way in which the many laminations had been splayed to radiate from the hub and then smoothed into the thrust-giving contour. Because of my experience with flying, and studies of aviation since my previous visit, I could better appreciate the aerodynamic features of these units in which Langley had tried some unique curvatures. I found a wooden box containing several small engines, revealing that Langley had tried various forms of power. A single-cylinder DeDion-Bouton engine was a rare type. Seeing a narrow ladder leading to a loft I climbed up and found the floor strewn with patterns for casting engine parts. There were several large boxes at one side. Opening one I found a pair of beautiful biplane wings labeled for the Quarter-size model aerodrome. They were exquisite, intact and firm, the spotless white fabric still eager for flight. The boxes were of equal craftsmanship, made of clear white pine, each of the sides, ends, and the top and bottom cut from a single piece of wood, 3/4 inch thick, gleaming with smooth shellac. They had been made before the days of large plywood panels. On the floor was a large dynamometer. I was trying to determine its purpose when Mr. Cole whistled and I had to cut my trip short. As we were walking out I asked him about the lumber and rigging high overhead on the rafters. "They," he said, "are the parts of the catapult used on the houseboat to launch the large aerodrome in 1903." I took a moment to open the wide doors on the east side of the building. The large ground area for handling the parts of the big machine was still there, but it had been converted to a tennis court, and was being enjoyed by several of the higher officials.

On the way back to my own shop I stopped off in Mr. Mitman's office. I had hesitated to do so because I had been playing hookey from the repair of a full-rigged ship model which had been lent to the Coast Guard for a parade float and been drenched in a summer storm, but I was so thrilled with the wonder of my hour with Mr. Cole that I was overflowing with an enthusiastic "Garberism."

I suggested that Langley's shop should be restored to the time of its aeronautic activity. It would be a marvelous exhibit. We could scrub the floor, erect glass-walled aisles around its periphery so that visitors could see the layout as though work was in progress, could have mannequins at the benches, one of Langley at his roll-top desk, hang one of the steam-engined models from the rafters, I would write labels to explain the significant details, and prepare a pamphlet emphasizing the true value of Langley's contributions to aeronautical knowledge and progress. This would be the finest display in the whole Smithsonian. The English had preserved James Watt's shop,

(Continued on Page 5)



Dr. Langley's associates working on his aircraft in the South Shed in 1900.

Marconi's laboratory was on display, Edison's Menlo Park was still in existence, Dayton was making plans for restoring the Wright brothers' shop. But all of those were largely restorations, while we had Langley's shop just about as he had last worked in it. Let's keep it going forever! I was all fired up, full throttle.

Mr. Mitman was attentive but did not share my enthusiasm. I wondered if he had been up in the shop looking critically at the ship model. Perhaps I should have excused my absence by explaining that I had to let the glue dry on the model, but I didn't.

Out of that interview I did salvage permission to prepare an exhibit of selected Langley material. There was a large mahogany-framed case at the east end of the East Hall containing an exhibit of beasts of burden including plaster elephants, camels, llamas, forms of carts and wagons, and an overburdened coolie with an enormous back-pack. I soon hid them away in a quarter unit and then rearranged the shelves and background for my Langley display.



FOOTNOTE TO SOUTH SHED HISTORY — From the 1880s until after World War I the Smithsonian's model and taxidermy shop was located in a room in the South Shed. This old picture of the shop from the Smithsonian's photo archives, shows SI taxidermist William Palmer (center) working on a tiger. He is sewing excelsior onto a model of the animal's body. An assistant (left) is preparing the skin. In those days the Smithsonian was considered the nation's leading taxidermy center. Headed for many years by William T. Hornaday, the shop's artists mounted hundreds of birds, fishes and mammals for museums and exhibitions.

Soon I had brought over the more impressive examples. From the taxidermists I learned that they had in one of their bins several of the stuffed birds which had been mounted for Langley's use on his whirling arm. I hung those from the top of the case. Two cellular kites and several boomerangs showed that Langley had tested those primitive aircraft. The propellers and airfoils formed impressive rows across the length of the case, while the small engines and larger instruments were placed on the floor. A group of photographs and labels made the purposes of the material known to the visitor. I regret that the case was too narrow for showing one of the biplane wing units, and there were several other treasures that could not be shown, but the case did look attractive and was in an appropriate place, near the models and large aerodrome suspended above. Sometimes, as I walked by and saw visitors looking at the case I would listen to their comments and then explain some detail to them.

Time in its inexorable fashion moved on and another war claimed my services. When I returned I was disappointed to learn that the Langley exhibit had been dismantled and even the case removed. I was told that the material had been stored.

My next visit to the South Shed was another disappointment. Hardly anything remained to show the Langley association. It was some consolation to learn that several of the machine tools had been taken to a Museum department for eventual display. The second floor was being used as a carpenter shop and downstairs was a sort of morgue for dead animals where their skeletons were cleaned. In one of the rooms was an accumulation of furniture scheduled for disposal. There I recognized a chest of drawers for hardware which I recalled seeing among the Langley material. I offered to buy it but was told I could have it if I would move it before the truck came to haul it away. I soon had it tied on the back of "The Old Bucket" as I had named my ancient Ford. I now have this cabinet in my basement shop at home where of recent months I have been making reproductions of historic aviation apparatus for the series of films I'm producing on the history of flight, thus justifying the cabinet's retention.

Following that visit to the South Shed I tried whenever possible to get over there and glean through the material for Langley items. Thus we do have the engine patterns and some other parts. But then, as I understand it, the personnel of some Smithsonian bureau persuaded some official in the front office that the South Shed would be more useful if it could be completely cleared to make room for their project. Permission was granted.

And now I learn that the Old South Shed itself is to be demolished. *Sic Transit Gloria Mundi*. Perhaps one of the Powers that Be will indulge an old timer so that I can some day see a marker in that place, on which can be told for those who do care, a few facts of aviation history that were accomplished in that location. And if you happen to see me genuflect as I pass that marker, don't laugh. Just smile, and permit me that reverence.

Visit to China

(Continued From Page 3)

NMNH, during the later years of his life. Dr. McClure was a professor and curator of botany at Canton's Lingnan University (now known as Sun Yat-sen University) from 1919 through 1943.

At Canton Dr. Ayensu was asked to give a lecture on the importance of taxonomic research and how it relates ultimately to food production and also about the importance and utility of botanical gardens as they relate to agriculture. He also had lengthy discussions with many of the scientists he met about another subject of great interest to him: conservation. Dr. Ayensu has headed the Smithsonian task force which made recommendations presented by the Secretary to Congress on the identification and conservation of endangered and threatened flora of the U. S.

The director of the Kwangtung Garden told Dr. Ayensu that in their plant introduction program they had been concentrating not only on medicinal plants collected from many parts of China and other parts of the world, but also on plant species that seem to be in danger of extinction. The Chinese botanists indicated their willingness to exchange material and information with their colleagues abroad.

The Kwangtung Garden is also taking an active part in the China Conservation Committee. This conservation program was inaugurated last year in Harbin, in Heilungkiang Province near Siberia. A number of research institutes and conservation stations have been established. In Yunnan Province, for example, four such stations have been established to study the plants in a 6,000-hectare reserve. In Kwangtung Province there is another station about 80 kilometers outside Canton. Dr. Ayensu said the discovery of a new species of silver pine in Kwangsi Province and some new plant genera resulting from extensive plant explorations, as well as the discovery of new conifer groves of *Ginkgo* and *Metasequoia*, has given a new impetus to the Chinese conservation program.

Operation Moonwatch Ends After 18 Years of Service

Moonwatch, the worldwide volunteer satellite tracking network that produced the western world's first observations of Sputnik I, ceased operations June 30 after nearly two decades of sky patrols.

The Volunteer Flight Officers Network (VFON), an informal organization of airline personnel which provided information on reentering satellites and bright fireballs, also was disbanded. Both organizations were coordinated by the Smithsonian Astrophysical Observatory with support primarily from the National Aeronautics and Space Administration.

When Russia launched Sputnik I into Earth orbit on October 4, 1957, the United States was, in the words of one space pioneer, "caught with its antennae down."

Only one tracking system was ready for that unexpected launch. Moonwatch, the international network of volunteer amateur astronomers formed and trained several months earlier by the Smithsonian Astrophysical Observatory, was able to provide the visual observations enabling U.S. scientists to determine Sputnik's orbit.

For the next 18 years, Moonwatch, and the more recently formed VFON, would continue to support the national space effort with more than 400,000 observations of satellites. And more than 5,000 volunteers would participate in the program during its lifetime.

Moonwatch developed out of the massive scientific endeavor known as the International Geophysical Year (1957-58). The National Academy of Sciences and the National Science Foundation assigned SAO responsibility for the optical tracking of all satellites launched during this period and Fred L. Whipple, then director of SAO, designed a special tracking camera, the Baker-Nunn, to be located at 12 sites around the world. To supply the Baker-Nunn stations with preliminary data on newly launched satellites, Whipple also established a global network of visual observers.

Whipple sent out appeals for volunteers to amateur astronomy groups around the world. Because this was one of the first opportunities for amateur scientists to make significant contributions to the IGY, the response was immediate.

By the spring of 1957, more than 70 Moonwatch teams, with more than 1,500 members, had been established in the United

States and its territories, while additional teams were being established in many foreign countries. The first Moonwatchers came from every professional walk of life: professional and amateur astronomers, teachers and students, scientists and businessmen.

The work of a Moonwatch volunteer was arduous and time-consuming, usually involving long lonely nights scanning the skies for "moving stars." Although SAO provided some instruction, support, and instruments, the only real reward for the hundreds of volunteers was the knowledge that their data were contributing to scientific research.

Although Moonwatch was not planned to be fully operational until March 1958, observations were made almost immediately following the launch of Sputnik. The first confirmed sightings of Sputnik I were made by groups in Sydney and Woomera, Australia, on October 8; and the first U. S. sightings were made by a team in New Haven, Conn., on October 10.

During the first weeks of the Space Age, essentially all observational data from visual sources were supplied by Moonwatch teams. (SAO's first Baker-Nunn was not operational until mid-November.) And Moonwatch continued to provide support when the Russians launched their second satellite, Sputnik II, on November 3.

By the end of 1957, 115 Moonwatch teams in the United States and 90 in foreign countries had made more than 700 observations of Sputnik I and II.

Obviously, the rapid development of ground tracking systems in the early 1960s eliminated the original need for Moonwatch. Yet Moonwatch remained exceptionally well suited for many specific tasks in the space program.

The worldwide distribution of the Moonwatch teams provided an inexpensive and relatively uncomplicated means of maintaining up-to-date data on satellite orbits, especially for "low-perigee" objects. These satellites come extremely close to Earth and therefore attain such high speeds they are often missed by cameras and radar systems.

Moonwatch observations of such objects also provided invaluable data on the physics of the upper atmosphere and the effects of the Earth's gravity field.

In addition, Moonwatch maintained a "death watch" on reentering satellites, determining the time and place of reentry into the Earth's atmosphere and aiding in the possible recovery of any surviving debris. (On September 5, 1962, a piece of the Sputnik IV spacecraft fell on a street in Manitowoc, Wisconsin. Moonwatch observations led to its recovery and identification.)

To support Moonwatch's reentry programs, Herbert Roth, a member employed by the Flight Training Section of United Airlines, established an informal reporting procedure among the flight personnel of his airline to gather observations made from the air. In 1969, Roth's group was incorporated into a larger organization — the VFON — that would eventually involve flight personnel from 120 airlines representing every country of the world, with the

exception of Russia, Japan, and the People's Republic of China. Since 1963, the VFON recorded some 4,200 observations.

According to one space scientist, when measured against systems such as Minitrack, Moonwatch's 400,000 observations were probably worth more than \$14 million.

Other educational and informational contributions of the Moonwatch network cannot be so easily measured. Many young members of the original teams — hooked early on space science — went on to become professional researchers in astronomy and related fields. And, in scores of countries around the world, the international fraternity of Moonwatch volunteers created an awareness and appreciation of American space efforts.

For the past 10 years, Moonwatch has been directed by a former Florida team leader, Albert Werner, and included 100 active teams around the world. Another 60 "inactive" teams could be mobilized for special tracking tasks.



The end of Moonwatch was observed by (from left) Albert Werner, last chief of the program; Fred L. Whipple, former director of the Smithsonian Astrophysical Observatory and founder of the Baker-Nunn tracking network and Moonwatch; Fred Durant, Assistant Director of the Department of Astronautics, National Air and Space Museum, who is holding an original Moonwatch telescope donated to the museum by SAO; Mrs. Grace Spitz, widow of Armand Spitz, planetarium designer and consultant to SAO, and Dr. David Challinor, Assistant Secretary for Science.

M. G. Courtney, Data Specialist, Drowns at Reston

Maxwell G. Courtney drowned August 10 while swimming in Lake Anne at Reston, Va., with friends.

Mr. Courtney had been a Smithsonian employee for about three years and most recently had been assigned to the Office of Public Affairs as a data processing specialist.

Mr. Courtney assisted in the establishment of the membership department of the Smithsonian's Resident Associates Program, which now has about 34,000 members in the Washington area. He also generally took part in planning many other Associates' activities, including a recent charter flight to the Soviet Union in which he served as a staff representative.

Born in Tallahassee, Fla., on Sept. 7, 1945, Mr. Courtney majored in mathematics and received a Bachelor of Arts degree in 1965, with honors, from Florida State University. He also had received a Master of Science degree in computer sciences from the University of Maryland.

Mr. Courtney was the first black student to attend Florida State University, where he was graduated at the age of 19. Among his survivors is his mother, Mrs. Hazel Franklin Courtney, of Tallahassee. A memorial service for Mr. Courtney was held August 14 at the Metropolitan African Methodist Episcopal Church in downtown Washington. Burial was at Tallahassee after a service there.



M. G. Courtney

Mall Site

(Continued From Page 1)

visitors each year, for outdoor exhibitions exploring the delicate relationship between man and the natural systems that support his life on this planet. The exhibitions would be related in theme and location to those of the adjacent National Air and Space Museum, which will deal with some of the implications of man's technology for the twenty-first century.

"The complex will provide in some sense a capstone for the museum experience of the Smithsonian visitor, ranging through man's achievements in science, art, history and technology to his need for a more informed relationship with his environment if these achievements, and indeed man himself, are to survive.

"The planned exhibitions would involve minimum interruption of the natural aspect of the site. They would include growing beds, water areas, temporary greenhouse-like structures, transparent domes, equipment models demonstrating for example the conversion of wind or solar radiation to energy. We are beginning to work on the planning and coordination of this total theme."



AWARDS PRESENTED — At a recent ceremony in his office, Michael Collins, Director of the National Air and Space Museum, presented Career Service Awards to various NASM personnel for years of employment with the federal government. Jeweled emblems were presented to: (left to right) Charles E. Earman (20 years' service); Edward B. Chalkley (20 years); Donald K. Merchant (15 years); Elmont J. Thomas (10 years); John R. Clendening (15 years); and on Mr. Collins' left, Morris M. Pearson, Jr. (25 years); Kenneth L. Smith (15 years), and James L. Jones (15 years). Seated are Barbara J. Clark (10 years) and Edna W. Owens (25 years).

Abbot Award

(Continued From Page 1)

when he was 99 years old. Dr. Abbot died December 17, 1973, at the age of 101.

Dr. Klein came to the Smithsonian in 1951, and in 1965 became the first Director of the Radiation Biology Laboratory. His work on the influence of various qualities of light on regulatory processes of plants led to his realization that there were no measured data for the color distribution of sunlight reaching the Earth's surface. Under his direction, the Laboratory began the development of instrumentation to measure light from sunrise to sunset in the wavelengths that influence biological development. Over the years a network of radiometry stations was established to cover several latitudes, with sites on the Mall in Washington; at RBL in Rockville, Md.; in Jerusalem, Israel; at Barrow, Alaska, and on Barro Colorado Island and Flamenco Island, Panama.

Dr. Klein became interested in the International Solar Energy Society, then the Association for Applied Solar Energy, shortly after its founding in 1954. Since joining the Society he has been a director, vice president, a member of the editorial review board of the journal *Solar Energy*, and has served on a number of committees. He was elected president of the society and was installed in office at its general business meeting in Los Angeles July 31. Since 1970, when the American Section was established, he has served as its secretary-treasurer.

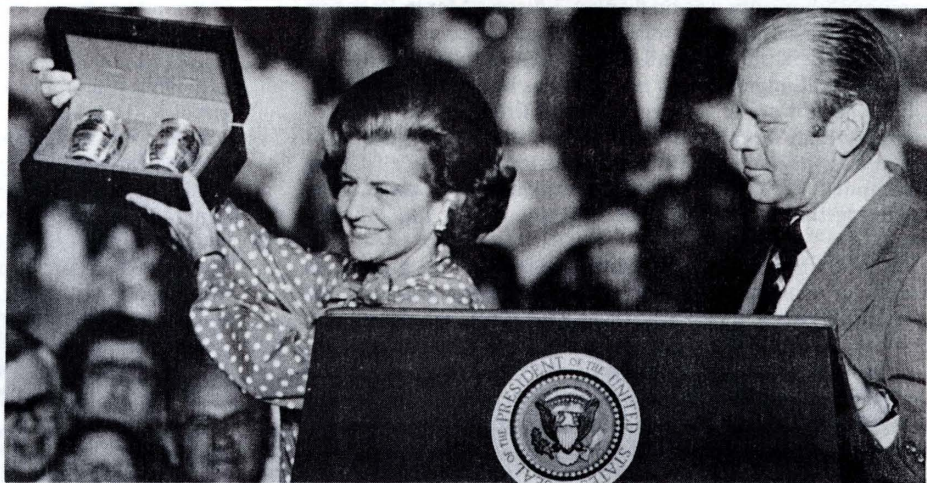
Dr. Shropshire has been Assistant Director of RBL since its establishment in 1965, having first joined the staff of the Smithsonian in 1954 when he was a student at George Washington University. His research in the influence of spectral quality of solar radiation on plant growth and development led to an active interest in the ISES, and he served as a director of the American Section and chairman of the membership committee until his election as chairman this year. He also serves as a director of ISES and on the membership committee of the international organization.

On the program for the five-day meeting were 250 papers on subjects ranging from research and applications of solar energy through economic and social aspects.

Bernard Goldberg, physicist at RBL, presented the first technical paper after the opening ceremonies, in a session on meteorological measurements and data. The paper, "Variations in the Spectral Distribution of Daylight at Various Geographical Locations on the Earth's Surface," by Drs. Goldberg and Klein, reported data taken from direct measurements between 1971 and 1974 on the spectral distribution of daylight at monitoring sites in Rockville, the Canal Zone and Alaska. One of the trends noted in Rockville has been a small but steady decline in the amount of solar energy falling on the earth's surface.

Howland Reappointed

Richard H. Howland, Special Assistant to the Secretary, has been reappointed to a four-year term on the Consulting Committee for the National Survey of Historic Sites and Buildings. Mr. Howland was also redesignated chairman of the committee, a position he has held for 12 years.



STIEFF PUNCH CUPS — Mrs. Betty Ford displays a set of punch cups made by the Stieff Silver Co., of Baltimore, based on an original in the Smithsonian collections, as she and President Ford participate in July 4 ceremonies at Fort McHenry in Baltimore harbor. The gift was given by the people of the city to commemorate the Fords' visit. The cups are among a line of items made by Stieff under the aegis of the Smithsonian's Product Development Program. The 'Fort McHenry punch cup' is modeled after a set that was given to Col. George Armistead by Baltimore citizens after his successful defense of the fort in the War of 1812. The set given the Fords was made by Stieff craftsmen who were recalled from vacation two days before the ceremony to complete the project on a 'crash' basis.

Birthday Party For SI Resident Associates Held

By Ed Gallagher

September 21 was chosen as the day for official commemoration of the founding of the Smithsonian Resident Associate Program, the Institution's membership organization for residents of the Greater Washington Metropolitan Area.

The Resident Associate Program in the words of its founder, Secretary Ripley, was initiated to "serve as a link between what the Institution does, whether in museum or laboratory or art gallery programs, or research and publications, and what the public in the Washington area can do to participate."

Mr. Ripley formally announced the establishment of what was then known as the "Smithsonian Society of Associates" on September 18, 1965, during the two-hundredth anniversary of the birth of James Smithson. Its establishment marked the fruition of a dream that had begun in the 1920s when Charles D. Walcott, fourth Secretary of the Smithsonian, realized the need for formal recognition of the support accorded the Smithsonian by its friends across the nation. In 1965, membership in the Associates was opened to all who cared to join with the Smithsonian in furtherance of the Institution's objective, stated by founder James Smithson in his will as "the increase and diffusion of knowledge among men."

Today the Resident Associate Program has an enrolled membership of more than 34,000, representing approximately 75,000 individuals. Through a comprehensive program of lectures; symposia; classes in the arts, humanities, sciences, and crafts; trips and tours; festivals, and special events, Resident Associate members of all ages are offered an opportunity to share in the life of the Institution.

Invitations to three anniversary receptions on September 21 were mailed to Resident Associates. Special commemorative pins were distributed to all attending. In addition, a commemorative serigraph and silkscreen poster edition by Washington artist Gene Davis has been commissioned and is currently available for purchase.

Indian Sculpture Shown at NMNH

An exhibit of bronze sculptures that express the spirit and mysticism of the American Indian opened September 2 at the National Museum of Natural History. The display will run through October on the museum's second floor rotunda.

The 50 works in the exhibit are the work of the New Mexico sculptor Lincoln Fox.

Internationally known for his unique Indian bronzes, Mr. Fox's works are shown by the Kennedy Gallery, New York City; Maxwell Gallery, San Francisco; Biltmore Galleries, Los Angeles; O'Briens Art Emporium, Scottsdale, and the Jamison Galleries, Santa Fe and Tucson.

Rockefeller Grant Funds SI Program

The Rockefeller Foundation recently awarded a grant of \$34,700 to the Smithsonian's American Indian Cultural Resources Training Program.

Operated by the National Anthropological Archives in the National Museum of Natural History, the program brings Native Americans to Washington for brief periods to acquaint them with photographic, documentary, and other materials relating to their cultures available at the Smithsonian and other institutions in the city.

Begun through a grant from the Bureau of Indian Affairs in 1973 and supported in 1974 by the National Endowment for the Humanities, the training program will be continued during the current fiscal year through a combination of Rockefeller money and appropriated funds. Twelve trainees will come for periods of about two months each during the year.

It is hoped that by this means Indians will be encouraged to make greater use of resources here relating to their past and, after they return to their homes, to begin the systematic preservation of materials still in private or tribal hands. In accepting the grant in behalf of the Smithsonian, Secretary Ripley remarked that "the American Indian Cultural Resources Training Program is a useful means, we believe, of making our collections and our expertise in museum and archival practice available to Native Americans."

The award culminated a seven-month application process by the Institution. Archives Director Dr. Herman Viola, working in concert with development officers James Lyons and Jeffrey Stann, visited a number of foundations in December of last year.

Bedini Is Author Of New Book

Silvio A. Bedini, Deputy Director of the National Museum of History and Technology, is the author of a new book, *Thinkers and Tinkers: Early American Men of Science*, published by Charles Scribner's Sons.

The book is an alternate selection of the MacMillan Book Club, which described the book in a leaflet:

"Until now the history of American science focused mainly on the Franklins and Audubons. Unacknowledged was an impressive band of self-taught men who solved the common practical problems of the emerging nations . . . In the beginning America was uncharted, wild and only marginally supplied from abroad. American settlers were forced to copy, improvise and invent, as best they were able, the myriad tools required for day-to-day living. Silvio A. Bedini has collected the stories and histories of the uncommon men, the craftsmen, surveyors and scientists, who looked at the common problems of the day and came up with solutions."

The 512-page work contains more than 100 photographs and is priced at \$17.50, retail.

Long-Term Program Brings Improvements to Museum Shops

By Barbara A. Brand

In the past several years, the Museum Shops of the Smithsonian Institution have experienced an expansion and development never before attempted by the Institution's retail operation. A long-term improvement program has made tremendous changes in the appearance and operation of the Museum Shops.

Leading the drive for the improvement of the Shops' merchandise is the Product Development Program, a project whose aim is to produce items inspired by or reproduced from the Smithsonian Collections. Fieldcrest Mills, Stieff, Tonka, and Universe Books have received licenses from the Smithsonian granting them the right to market such products as reproductions of textiles and pewter, miniature dioramas, and full-color art calendars. All of these items were designed in close collaboration with museum curators. A Smithsonian Christmas catalogue will make its debut in October, illustrating these new products, plus many more selected from the Museum Shops' wide selection of gifts and books (see story on this page).

The search for merchandise which is appropriate to the purposes and educational

headed by Jim Hull, has been established to respond to this growing aspect of the Museum Shops operations. The accounting section, recently streamlined and computerized, is directed by Sandra Nickens, Assistant Controller (who has been a Museum Shops employee for almost ten years).

The Museum Shops are now embarked on a plan of expansion. In the last year, the Hirshhorn Museum Shop opened, and two new facilities replaced the shops in the Museum of History and Technology. When the Arts and Industries Building reopens in May, there will be an "1876 Shop," with fixtures and merchandise reflecting the optimism and taste of the Centennial era. The new Air and Space Museum, opening in July, will have a large Museum Shop carrying books, gifts, and models of interest to aviation buffs.

The Museum Shops have spent two years in broadening their horizons, and will continue to do so for many more. Not only are the shops more attractive and visible, but the selection of gifts has been carefully aimed to reflect the educational scope of the national museums. William Rowan III, Director of the shops, states that theirs is a modest goal: that the Smithsonian Institution will have the finest museum shops in the world.

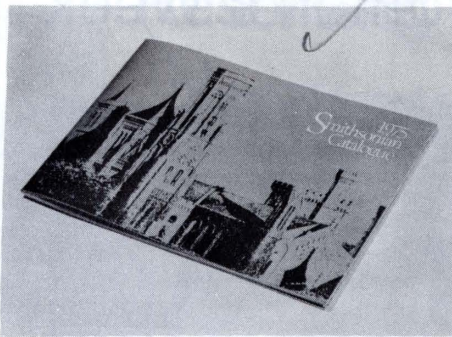
The author of this article, Barbara Brand, whose first job was that of administrative assistant to the Director of the Museum Shops, is leaving to become administrator of Hammond-Harwood House at Annapolis after 3½ years at the Smithsonian.

goals of the Institution is a difficult and lengthy process. Florence Lloyd, Josephine Fingeret and Kathy Borrus, buyers for the Shops, spend much of their time interviewing vendors and traveling to gift shows, conventions and craft fairs all over the country. Whenever a new item is selected for sale in the Shops, it is usually referred to one or more curators for comment on its appropriateness and accuracy. Books are also chosen with great care, since scholars and visitors alike require a wide range of technical and educational material from which to choose.

The largest department of the Museum Shops is the sales section. A substantial staff of career and seasonal employees keeps all nine shop locations going at a constantly busy rate. The sales staff is the vital link between the public and the buyers. The ideas which they relay guide the merchandising staff in the search for items which are both educational and saleable. The daily operation of the shops is managed by Irene Jeffers, one of several supervisory employees who have grown up with the Museum Shops over the past few years.

Several departments support the activities of the buying and selling staffs. Display is extremely important; a well-trained staff is directed by Bob Dills. Roy Stewart supervises the receipt and distribution of merchandise at the large warehouse facility at North Capitol Street. Requests for merchandise by mail have been increasing over the past months, and are expected to increase even more when the catalogue becomes available. The mail order department, organized and

Smithsonian Catalogue Published



Christmas cards in the catalogue feature artwork from the Hirshhorn, National Collection of Fine Arts, National Museum of History and Technology, Cooper-Hewitt and Hillwood collections.

Four calendars include an engagement calendar that provides a nostalgic view of America; a wall calendar based on items in the Hirshhorn; another based on paintings in the NCFA, and a fourth featuring floral photos from the National Museum of Natural History.

Other items include pewter, silver, linens, needlework kits, dinosaur stuffing kits, dioramas, jewelry, and two glass items reproduced from the NMHT collection. Recent books by Smithsonian staff members on a variety of subjects are also offered. Products have been selected to reflect the range of the Smithsonian's collections.

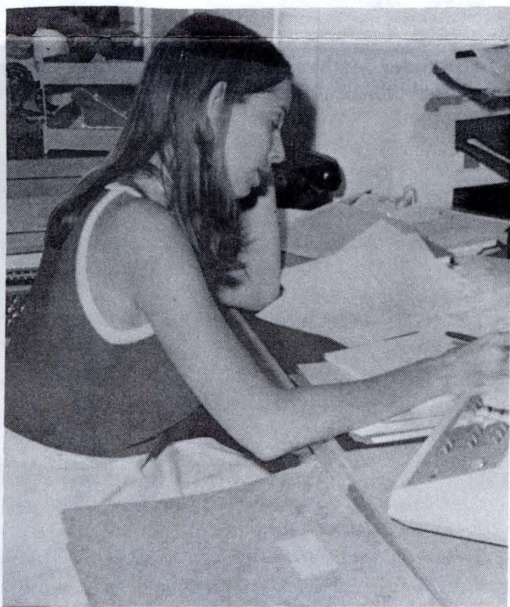
The catalogue will be sent to all employees, to Resident Associates, and to a list of 25,000 visitors. Advertisements will appear in *Smithsonian* and five other magazines whose readers may send 25 cents to get copies. Orders will be filled out of stock at 1111 North Capitol St. The 20 per cent employee discount will apply.

The first Smithsonian Christmas catalogue, with items for sale based on the Smithsonian collections, will make its appearance in October, Richard Griesel, SI Business Manager, has announced.

The 32-page, full-color catalogue is being designed and printed for the Institution by outside firms. It was produced under the editorial direction of Mrs. Virginia Fleischman, Special Assistant for Product Development in the SI Business Management Office.



Flora Moody assists customers at NMHT east shop.



Karen Bigelow assigns computer stock numbers for Museum Shops merchandise.



Florence Lloyd and Barbara Brand in the book stockroom at NMNH, where Museum Shops offices are located.



Libby Cutler verifies transfers of merchandise.



Helen Stephan checks in jewelry at NMHT.

Scenes From 'Women's Week' at the Smithsonian



International Women's Year 1975 was observed at the Smithsonian during "Women's Week" August 4 through 8. Guest speaker at the opening program was Dr. C. Dolores Tucker, Secretary of State for the Commonwealth of Pennsylvania (above left), who was introduced by T. Ames Wheeler, SI Treasurer. 'Even though the road is rocky, personal experience has taught me that perseverance is the only way to wear down those rocks,' Dr. Tucker said in the course of her address, adding 'I'm certain that the antiquated attitudes with which you have had to contend will gradually become a thing of the past.'



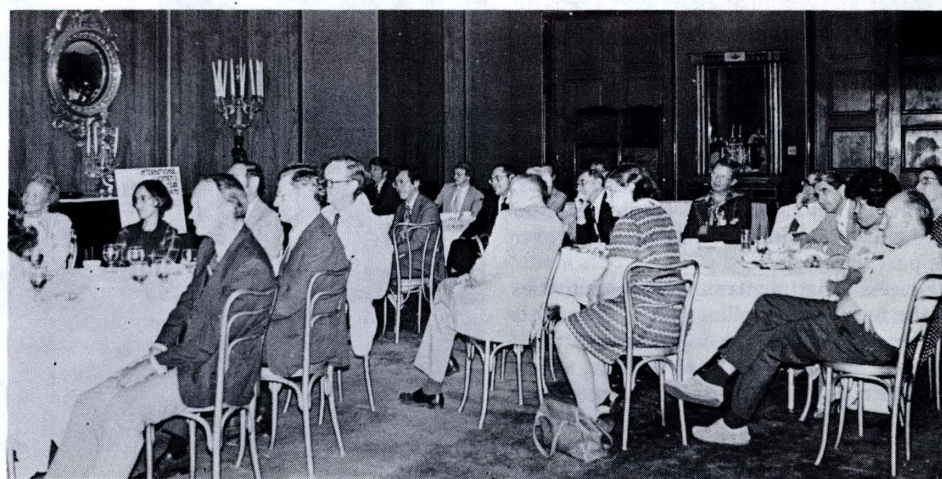
International Women's Year Coordinators for SI buildings are (from left) Barbara Faison, NPG-NCFA; Karen Hinkle, Barney House; Carol Parsons, Hirshhorn; LaVerne M. Love, Women's Program Coordinator; Rose Ann Tilton, Chesapeake Bay Center; Claudia Lipschultz, Radiation Biology Laboratory; Shirley Smith, NMHT; Lillian Kozloski, NMNH. Missing are Priscilla Smith, Freer; Ruth Monk, L'Enfant Plaza; Wendy Burrows, Renwick, and Chunhae (Debbie) Yang, A & I. The coordinators helped to plan and carry out the IWY Observance Program, and showed movies in almost all SI buildings.



Alexander Methvan, career development specialist, conducted two sessions for supervisors, entitled 'There Ain't No Santa Claus,' at NMHT and Hirshhorn.



Three staff members involved in the Women's Week program were (from left) Patricia King, Barbara Crumpler and Lucille Dawson.



An International Women's Year Luncheon was attended by bureau heads and department chairmen, hosted by LaVerne M. Love, SI Women's Coordinator. Dr. Estelle Ramey of Georgetown University spoke, and a statistical breakdown of employees in each bureau was given by Archie Grimmett, Director of the Office of Equal Opportunity.



A skit presented at the opening program was entitled 'Presenting Discrimination During Heterosexual Interface.' It was written by Louisa Stimpert and performed by SI staff members from L'Enfant Plaza offices. They were (from left) Dolores Mortimer, who was narrator, Juanita Jeter, Nadine Lee, Marta Schley, Patricia King, Lucille Dawson, and Francine Berkowitz. Barbara Crumpler directed.



One of the men participating in the Women's Week program was Armstad Chambers who attended the "Future Planning Workshop" conducted by Vince McDonnell, Director of the Office of Training and Career Development. At right is Edythe Coffey.