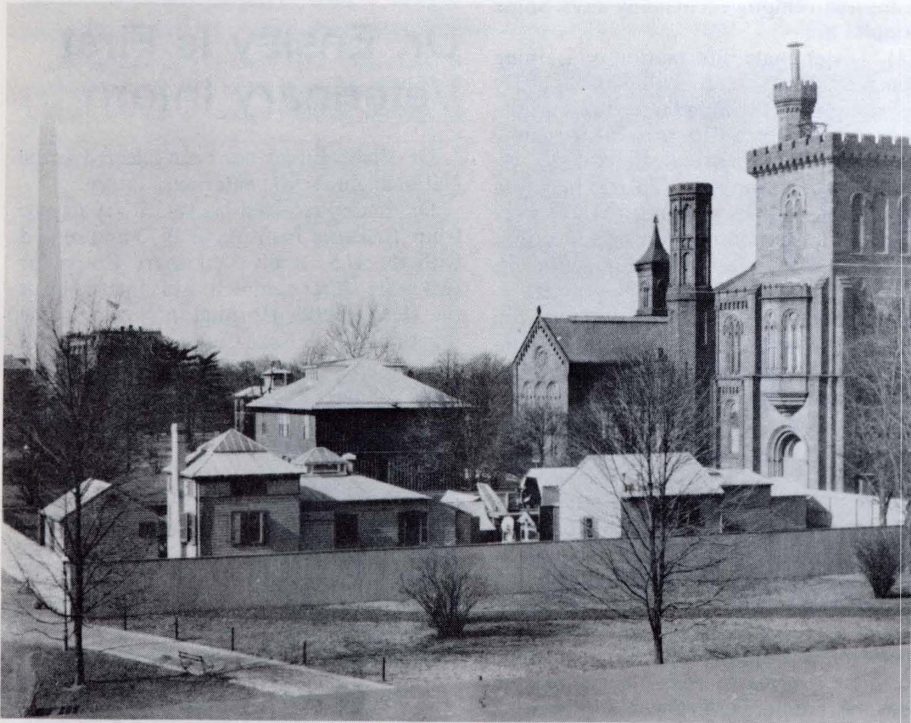




# THE SMITHSONIAN TORCH

Smithsonian Institution, Washington, D.C.

August 1975



The buildings south of the castle as they appeared in the early years.

## Those Simple Structures Housed History Of SI Astronomical Research Progress

By Von Del Chamberlain

Those old frame buildings behind the Smithsonian's castle are not as obscure as they now appear.

They have played a very significant and interesting role in the history of the Institution.

They will be removed soon (see the related story on this page). Before they are scraped away, take another look at them and let your mind run back over a bit of early Smithsonian history . . .

On June 24, 1838, John Quincy Adams entered the office of President Van Buren to discuss the use of the recently acquired Smithson funds. He suggested that the money be used to construct, equip, and staff an astronomical observatory in order to produce a "systematic and continued scientific series of observations on the phenomena of the numberless worlds suspended over our heads — the sublimest of all physical sciences, and that in which the field of future discovery is as unbounded as the universe itself." At that time no observatory facility was to be found anywhere in the country. A few years previously George Airy, who later became the British Astronomer Royal, had noted in a survey that he was unable to report on American astronomy because essentially there was none.

### Langley Arrives

For many years Adams continued his attempt to establish an observatory with the original Smithson funds. His effort failed but the idea did not die. It declined while the Institution was established and then slowly, but steadily, strengthened again through the sound scientific interests of Joseph Henry and the careful planning of Secretary Spencer F. Baird who hired an astronomer as an Assistant Secretary — Samuel Pierpont Langley.

Less than one year after arriving in Washington, with the death of Spencer Baird in 1887, Langley became the third Secretary of the Smithsonian. He was a man of many interests and accomplishments.

His astronomical studies had included the planets, the moon, comets and the development of observational instruments. Perhaps most important was his intense interest in the physical nature of the sun. He reminded people of its significance: "We . . . are warming ourselves at this great fire which called our bodies into being, and when it goes out we shall go too. What is it? How long has it been there? How long will it last? How shall we use it? This interest led directly to the erection of a "wooden structure of the simplest and most temporary character" on the Smithsonian grounds in late 1889 and early 1890.

"The prime object until lately," the Secretary observed, "has been to say *where* any heavenly body is, rather than *what* it is." With this guiding philosophy a new type of astronomy facility was established.

Those "temporary" structures were the house of the Smithsonian Astrophysical Observatory for the next 65 years and then continued in other uses for another 20 years to the present time. The buildings stand today still appearing very temporary amid the other concrete and stone structures of the Institution. And temporary they now are for their removal is scheduled to begin very soon.

When first constructed those old buildings housed equipment specifically designed to study the energy spectrum of the sun. From 1890 until the turn of the century the primary work of the observatory was to map the positions of the lines in the infrared

spectrum of the sun. For the following half century emphasis returned to Langley's earlier interests — the determination of the intensity of the sun in various parts of the spectrum and the interactions of solar radiation with the atmosphere producing the weather and providing the conditions which nurture us.

The work was carried out by Charles Greeley Abbot, hired by Langley in 1895. In addition to watching over this work Langley administered the affairs of the Institution and built another frame building in the South Yard where he carried out his aeronautical work.

The interest in meticulous documentation in the sun's output of energy led to the establishment of observing stations far away from Washington at remote places such as Mount Whitney and Table Mountain in California, Bassour in Algeria, Calama and Mount Montezuma in Chile, Burro Mountain in New Mexico, and Mount Saint Katherine on Egypt's Sinai Peninsula. High altitude observations were compared with each other to determine the actual energy emission of the sun and its possible variation. These measurements were then compared with low altitude observations to produce data basic to meteorological study.

In 1955 the facility in Washington was discontinued for astrophysical use with the transfer of the SAO to Cambridge, Mass., where it became associated with Harvard University. The move fulfilled a recommendation made 85 years earlier by Secretary Henry: "As to the location . . . I think it important to connect it with some well-endowed and well-established college or university."

Astronomical interests of SAO have broadened to include virtually every aspect of astrophysical investigation. Equipment has changed from the bolometer once housed in the frame buildings of the South Yard to the multi-mirrored telescope at Mt. Hopkins Observatory and instruments aboard orbiting solar observatories and other space probes.

### Significant Trend

In 1838 John Quincy Adams started a trend which continued through the struggles of Abbot to eliminate the effects of the atmosphere in calculating the power of the sun; through trials of Langley directed toward the gift of atmospheric flight; through the support of the Institution to assist Robert H. Goddard in the development of a device intended eventually to carry instruments and humans beyond the atmosphere; to our own day when we can observe the universe from space without the hindrance of a variable atmosphere, study lunar samples in our laboratories on the Mall and send instruments toward distant planets.

The day star was the object of research at the original Smithsonian Astrophysical Observatory. This interest has never been discontinued. It is fittingly represented in the current great seal of the Smithsonian. The same sunburst symbol was part of the crest of Sir Hugh Smithson, father of James Smithson who founded the Institution. The crest includes the figure of a red demi-lion holding in its paws the sun "in splendor" as if to pass it forth through successive generations and historical events as a gift to be intensely pondered and profoundly enjoyed by those who would pause to examine it.

*A more complete treatment of the history of the SAO can be found in Lighthouse of the Skies, by Bessie Zaban Jones, Smithsonian Institution Press, 1965.*

## Work on Victorian Garden To Start Behind 'Castle'

Preliminary work on the Victorian Garden to be laid out behind the Smithsonian Institution Building for the Bicentennial year will begin August 18 with the closing of a portion of the South Yard parking lot behind the "castle."

### A & I Building Closed Until '76

The Arts & Industries Building was closed to the public August 1 for renovation and installation of the "1876" Bicentennial exhibit there.

It was announced that the rotunda area and portions of the halls where construction is underway will be closed to all personnel except those with special authority. Entry into the building will be restricted to the northwest and east doors.

### Garber's Memories

"Memories of the Old South Shed" by Paul E. Garber, historian emeritus of the National Air Space Museum, will appear in the next issue of the TORCH. Mr. Garber will discuss the significance to aviation history of the two-story building in the South Yard. In this article early experiments in astrophysics carried out in the small buildings behind the Smithsonian castle are reviewed.

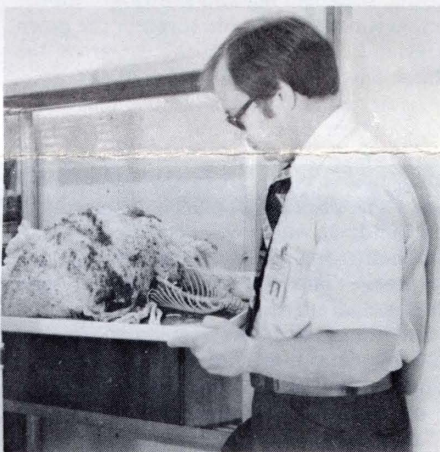
First the area at the west end of the present parking lot will be cleared and the two-story "South Shed" or "Annex" building will be razed. Then in November a new parking area at the west end of the Yard will be opened. The rest of the present lot will be closed and the one-story buildings razed, except for the old metal Air and Space Building. That structure will be taken down in the third phase of the project, early next year, and the Victorian Garden completed.

Although the buildings to be razed present an undistinguished appearance, they are of considerable historic significance, as related elsewhere in this issue of the Torch.

Approximately 140 parking spaces will remain behind the castle at the west end of the present lot, compared to the 250 spaces in the Yard now. Those drivers displaced will be permitted to park in areas of the garage designated for employees under the new National Air and Space Museum between Fourth and Seventh streets.

Information about the parking change was given in a memorandum dated July 23 from Kenneth E. Shaw, Director of the Office of Plant Services. Individual notification was sent each person holding a parking space in the affected area. They were told to contact the Parking Coordinator, Mary Rakow, in Room 2486 of the Arts and Industries Building (Extension 5484), from 10 to 12 and from 3 to 5, work days July 28 through August 15. Those on vacation then should call the Coordinator to make special arrangements. Beginning August 18, the Coordinator's hours for dealing with permits will be 11 to 12 and 3 to 4 each day.

### The Beetles' New Home



Mr. Greenwell

For the last 25 years the soon-to-be-torn down South Shed has gained an odorous notoriety around the Institution as the "Bug House."

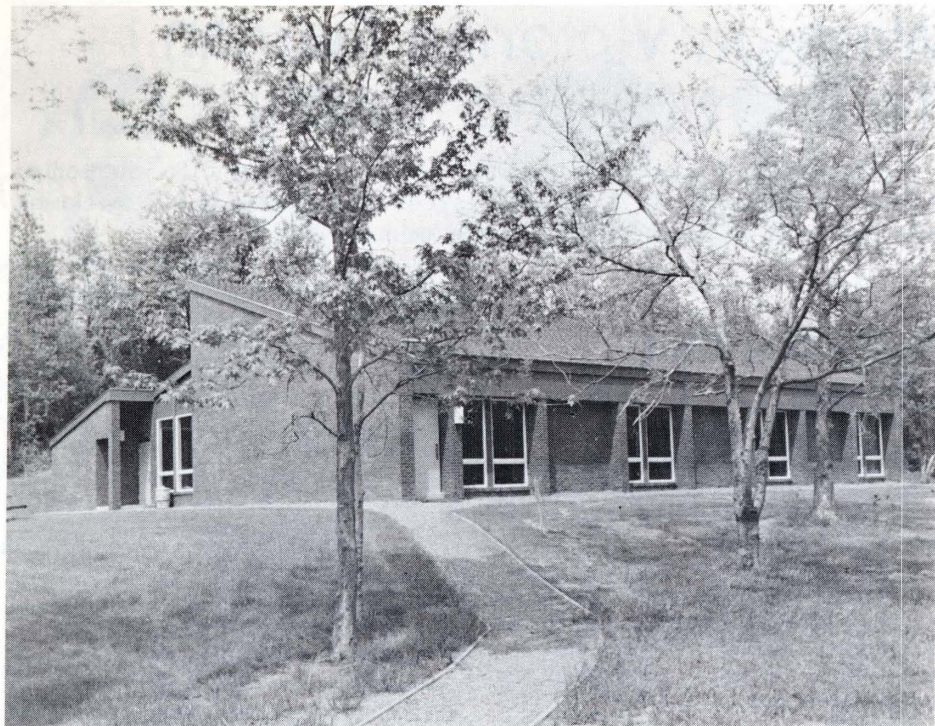
Few persons entered the door to this skeleton preparation area without taking a deep breath.

"People come in here little by little," said Joseph Biggs, who operated the facility until his retirement several years ago. Mr. Biggs was making reference to the powerful stench of dried flesh which permeated the room and, when the wind was right, often wafted into the windows of the "castle" and the Arts and Industries buildings.

In his laboratory Mr. Biggs saw to the cleaning, drying and bleaching of bones ranging in size from whale skulls to tiny bat jaws. Then he would take them back across the Mall to the Department of Vertebrate Zoology at the National Museum of Natural History for storage and study. The biggest help to Mr. Biggs in this operation was a resident colony of dermestid beetles whose larvae efficiently ate every scrap of flesh off small skeletons. From the beetles, of course, came the name "Bug House."

Last month the beetles were packed in plastic bags and moved into two modern temperature and humidity-controlled chambers in the east courtyard of the Natural History Building. Above, Frank Greenwell, supervisory specialist of the NMNH Division of Mammals, checks to see how the beetles are faring in their new quarters. A dozen feet away, workers are laying the foundation on a new two-story Osteo-Preparation Laboratory. Here specimens that come out of the new bug chambers will be fumigated and then sent to a preparation area. There will also be tanks, a freezer and other facilities on the ground floor for the dissection and preparation of porpoises, dolphins, whales and other large mammals. Completion is scheduled for late fall.





The Jean C. Schmidt Environmental Education Building at CBCES.

## Jean C. Schmidt Building Dedicated at Bay Center

By Gerald Lipson and Marjorie Beane

On Tuesday, June 12, 1973, Jean Schmidt of Middlebury, Vt., a 22-year-old graduate of Carleton College in Northfield, Minn., rose early, excited at the prospect of the first day on her new job at the Smithsonian's Chesapeake Bay Center for Environmental Studies.

As director of the summer ecology program, she was to head a new undertaking that would focus on environmental education for youngsters. The program was her own brainchild, the result of a year of planning and effort, and she was keen to get started.

Jean, an avid outdoorswoman who loved cycling, backpacking and skiing, got on her bicycle for the short ride through the green Maryland countryside to the center on the Rhode River just south of Annapolis.

She never made it. Her bike collided with a truck and she died instantly.

A symbol of her effort and dedication stands today, however, in the form of the Center's new \$212,000 environmental education building, which was dedicated to Jean C. Schmidt June 29 in ceremonies attended by more than 100 friends, guests and Smithsonian officials.

Dr. Francis S. L. Williamson, director of CBCES, determined immediately that the structure then just getting underway should be named for Miss Schmidt.

"Jean was a vital and moving force in the development of the education program of the Chesapeake Bay Center," he said in his recommendation.

Jean, who majored in biology and economics at Carleton, had first worked at the Center during the summer of 1972 as a research assistant, analyzing soil maps of the Rhode River watershed and designing map overlays to show land-use suitability.

Deeply interested in children, she had planned eventually to enter medical school and specialize in pediatrics. Meanwhile, she began developing plans for an environmental education program aimed at youngsters.

In corresponding with Dr. J. Kevin Sullivan, now acting director of CBCES, she said that, "for the individual child, I would like to develop an alertness and ability to observe closely."

"Children that play hide-and-go-seek in the woods can be oblivious to what's around them - a shelf fungus, wind blowing seeds, a woodpecker hammering at a tree for insects," she wrote.

"Instead of approaching the environment to find out what is there, I'd rather have kids dream up what *could* be there and then check to see if it is," she added.

"I'd also like the children to experience the outdoors in many ways: at night, in a rainstorm, during different seasons, at sunrise or the morning after a rain. A prerequisite to understanding the environment is being outdoors and being aware."

It was just such an "environmental awareness" on the part of Secretary Ripley which has preserved the Center and helped bring it to its present position, observed Dr. David Challinor, Assistant Secretary for Science, in his dedication remarks.

Dr. Challinor noted that when the Smithsonian first acquired what was then a 350-acre dairy farm in 1965, as part of a bequest, the immediate reaction of the Regents was to sell the property and invest the funds.

"But," he added, "after visiting here, Mr. Ripley, then newly arrived at the Smithso-

nian Institution, said 'no,' that in view of the heavy development underway on the western shore of Chesapeake Bay, this place offered a unique opportunity for environmental and ecological study."

Today, the Chesapeake Bay Center has grown to a 2,600-acre facility encompassing a wide variety of environmental programs and studies.

As Jean's mother, Mrs. Ruth B. Schmidt, said at the dedication, "When Smithsonian



Jean Schmidt

officials approached us about it, there was no question in our minds that this building should be named for Jean. She personified the kinds of activities and programs that are envisioned here."

Dr. Sullivan, who presided at the dedication, described Jean as "an extremely bright girl" who was interested in working with children and in conveying to them the excitement that she found in science and the outdoors. He said that "her character personified the kind of use we would like to make of the building."

The single-story, red-brick building will enable the Center to expand greatly its educational and public service activities. It contains an auditorium seating 200 that can be divided into rooms for smaller meetings, plus a dormitory area with facilities to house 12 scientists or college students on work-study or research projects at the Center. Workshops on environmental education, meetings of citizen groups and conferences on environmental research will be held in the building.

Dr. John Falk, who coordinates education and information activities at the Center, described CBCES as a "living museum."

"Our collections here are in a constant state of flux, the beautiful red bird that was here a minute ago cannot be counted upon to sit still for a curious child or adult," he said. "Therefore the strategy, and frequently the purpose of the educational programs must be different from those of a natural history museum or a portrait gallery."

"Our educational mission at the Chesapeake Bay Center is to improve the environmental literacy of our citizenry. This must begin at home, but can't stop there. By research, educational curriculum development and the establishment of model

(Continued on page 4)

## About SI Women Training Office Serves Employees

By James McCracken

The Women's Council is asked frequently about training at the Smithsonian, and council members believe that an insight into the services provided by the Smithsonian Institution Training Office would be helpful.

The Training Office serves the needs of Smithsonian employees in many ways. Some examples are:

(1) "Disseminate information on training opportunities" — It does this by regularly publishing the "Training Opportunities Announcement" which lists *some* of the many courses or seminars being offered regularly in the Washington area. This is merely a sampling of courses available. Much more detailed information on courses and course content can be obtained by contacting the Training Office in person or by phone.

(2) "Advise supervisors and employees on selecting the best and most economic training course to meet their expressed needs" — This can only be accomplished if the supervisor and employee discuss what the needs are, and determine what training will best serve the needs of the employee as well as the needs of the Institution. The Training Office will try to find training programs to satisfy expressed needs, if training is the answer.

(3) "Advise supervisors and program managers on whether proposed training is covered by SI policy" — Naturally, if a supervisor or employee discovers a training course or courses to meet their expressed needs the Training Office would only check the course or courses to insure that they are within guidelines expressed in SI policies (which are derived from Civil Service Commission guidelines), and the Government Employees' Training Act.

(4) "Conduct Smithsonian-wide programs to meet either the general needs of many offices or the special needs of the Institution" — The Training Office currently sponsors many in-house programs ranging from skills oriented classes taught in the Learning Lab, to Career Planning classes and Supervisory Training.

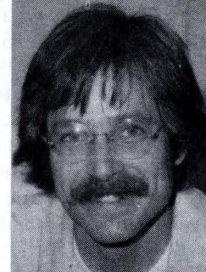
(5) "Direct the efforts of a cadre of Training Coordinators who are located throughout the SI" — The Training Coordinator program was set up a year ago as an attempt to improve communications with individual units and people in the Institution. Essentially the Training Coordinator serves as a two-way communication link, informing us of training needs and activities in her/his unit and receiving from us information on training which is then passed on to her/his fellow employees.

(6) "Provide advice and counsel to individual employees on training for career enhancement" — This "career counselling" service is a real but somewhat curtailed effort on the part of the training staff due to the enormous amount of time required for such counselling. Nevertheless it is one of the functions that we consider to be important enough to warrant the extra effort on our part.

## Dr. Ensley Is First Veterinary Intern

Dr. Philip Ensley has been selected as the National Zoo's first veterinary intern.

Dr. Ensley received his veterinary degree from Tuskegee Institute in 1970 and served with the U.S. Army Veterinary Corps for two years. After completing his internship at the Henry Bergh Hospital in New York he practiced in Salt Lake City. His main interest is exotic animal medicine, especially avian and reptilian.



Dr. Ensley

Selection was made on the basis of academic record, recommendations and interest in exotic animal medicine.

In his 15-month period of residency, Dr. Ensley will assist the Zoo's veterinary staff in the broad areas of clinical medicine, prophylactic programs, clinical pathology and histopathological diagnoses. Cooperative programs with George Washington University Medical School, the University of Maryland and Johns Hopkins University will provide an in-depth exposure to all facets of comparative animal medicine.

## Lang Joins Staff Of General Counsel

John W. Lang joined the legal staff of the Smithsonian as Assistant General Counsel, effective June 23, Secretary Ripley has announced.

Mr. Lang received a B.S. degree from the U.S. Military Academy at West Point in 1964 and served in the army five years. He attended the University of Texas School of Law and, after receiving his Juris Doctorate degree in 1972, was a law clerk with the Texas Supreme Court. Prior to joining the Smithsonian, Mr. Lang was associated with the law firm of Pattishall, McAuliffe & Hofstetter in their Chicago and Washington offices, specializing in trademark and copyright law.



**FIRST LADY AT THE RENWICK** — Mrs. Gerald Ford visited the Renwick twice within a month, the first time on an unannounced Saturday visit with Mrs. Janet Ford, the President's sister-in-law, and Mrs. Elizabeth Norblad, Susan Ford's godmother. On her second visit, escorted by NCEA Director Joshua C. Taylor and Renwick Director Lloyd Herman, she previewed the "Craft Multiples" show. Although scheduled for a 30-minute tour, she stayed a full hour, asking interested and well-informed questions. When she was puzzled by the inclusion of three pillows in the exhibition, Dr. Taylor explained that woven yardage is difficult to show effectively and thus craftsmen weave pillows to demonstrate their talent.



## Dr. Trousdale to Embark on Fifth Expedition to Buried Asian City

Archeologists returning to the field are men burdened by maddening and mundane last-minute details.

On a recent day Dr. William Trousdale, a curator in the Department of Anthropology at the National Museum of Natural History, was trying to do three things at once: talk politely to a visitor; finish packing a supply of whisk brooms, spare Land Rover parts, and a supply of powdered eggs, and at the same time prepare a batch of photos requested by the Afghanistan Institute of Archaeology.

Afghanistan is where Dr. Trousdale is headed — he is about to begin the fifth season of a study of the historical ecology of the southwestern area of that country — and he knows that a request by the Institute is not to be taken lightly. It keeps a close eye on foreign archeologists, no matter how impeccable their credentials.

Dr. Trousdale is philosophical about this fact of life, even though the rules and regulations can occasionally be enervating. The Institute recently ruled, for example, that from now on anyone undertaking to dig in the country must restore or preserve what he finds, or at least contribute to a fund for this purpose.

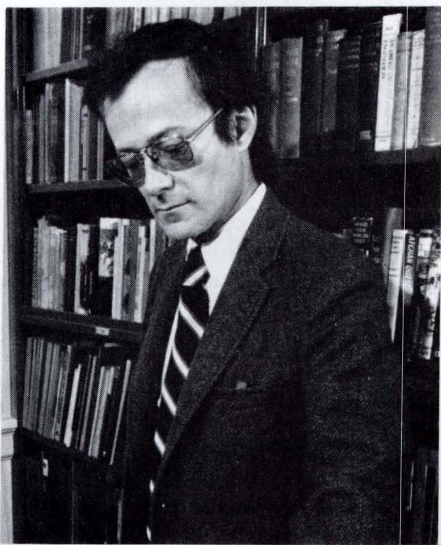
"Admittedly, it's a perfectly legitimate viewpoint for Afghanistan to take," Dr. Trousdale says. "For many years archeologists dug with little regard for the preservation of important cultural remains. They found them in great numbers. But in doing so they left a lot of important monuments in ruins. Now the country is saying that if an archeologist wants to dig a site he should also share the responsibility for restoring and preserving what he uncovers."

Preservation is only one problem. The Helmand-Sistan area he is currently investigating in southwestern Afghanistan is so forbidding and inaccessible that it makes it difficult for him to find qualified specialists for his field party. Many are not keen about enduring the hardships of a landscape that is almost as desolate as Antarctica, its temperatures hovering at around 100 degrees and the winds often blowing for days unrelentingly and viciously at 25 to 40 miles an hour. But a small, dedicated corps of specialists has worked with the project since its inception in 1971.

### 'Granary of Asia'

Despite its inhospitality to life the region is of extraordinary archeological interest. Islamic ruins are scattered everywhere over the 500 square miles of the Sistan desert. Most of them date to a period between 1000 and 1500 A.D. when this area supported a population of hundreds of thousands of people and was known as the "granary of Asia."

The city of Sar-O-Tar is the largest ruin in the region and the site on which Dr. Trousdale's project has focused up to now. Inside its 80-foot-high walls and moats were richly ornate mosques and palaces with soaring arches, grand courtyards and pools. The city flourished until the 13th century when it was sacked by Genghis Khan's hordes. They also destroyed the intricate system of dams and canals that supplied the city and its outlying region with water from the Helmand River 50 miles distant. Political decline followed and then came the sand. The wind blew deposits out of ancient lake beds which buried the region under dunes 25 to 60 feet high.



Dr. Trousdale

One of the objectives of Dr. Trousdale's project has been to study the sophisticated hydrological system that once fed water into the Sistan, to see if there is a practical means of rehabilitating the region. Evidence has been uncovered that the sanding of the region is a cyclical phenomenon. Twice over the past 3,000 years the area has cleared itself of sand and been reinhabited by man.

This year Dr. Trousdale will spend most of his four-month stay investigating another sector of the Sistan area. It is nearer the Helmand River where the Afghanistan Government plans a new road. Dr. Trousdale is interested in seeing if the periods of history during which the Sar-O-Tar region was unoccupied can be accounted for closer to the river. If it was continuously occupied, there is a possibility that some links can be found to the Indus Valley civilization, or to cultures north and west in Iran.

He will revisit Sar-O-Tar briefly to continue charting the sand dune movement in the area and to take fresh samples from his main excavation trench for carbon dating. His earliest date in the city so far is 1st century B.C. but he is only one third of the way down in the mound at the city's center — a mound in which he has so far uncovered the ruins of three palaces built one on top of another.

### Sar-O-Tar's Fate

One aspect of his work that gives Dr. Trousdale a major concern is that the part of Sar-O-Tar that still stands uncovered by sand is rapidly collapsing.

"It should be studied by architectural historians and specialists on urban settlement patterns," he said. "In 50 years much will be unrecoverable. But the region is so remote still that few realize the richness or importance of its remains."

## Mrs. Jacqueline Austin Named Travel Manager

Mrs. Jacqueline Frost Austin has been appointed Travel Manager for the Smithsonian Associates' growing travel program.

Mrs. Austin comes to the Smithsonian from the University of Maryland, where she was the head of the circulation department of the McKeldin Library. In addition, she has held management positions in the tourist industry and with the Cave Research Foundation. She holds a B.S. degree from the University of Kentucky and an M.L.S. degree from the University of Maryland.

Mrs. Austin will be responsible for the Tours Management Division, National Smithsonian Associates. Under the organization of the Office of Membership and Development, the division will manage the business aspects of all educational tours — approved, planned and proposed for the future by SI organizational units with the exception of Associate overnight tours, Archives of American Art tours and the Foreign Study Tours.



Mrs. Austin

### SMITHSONIAN TORCH August 1975

Published for Smithsonian Institution personnel by the Smithsonian Office of Public Affairs, William O. Craig, Editor; Kathryn Lindeman, Assistant.

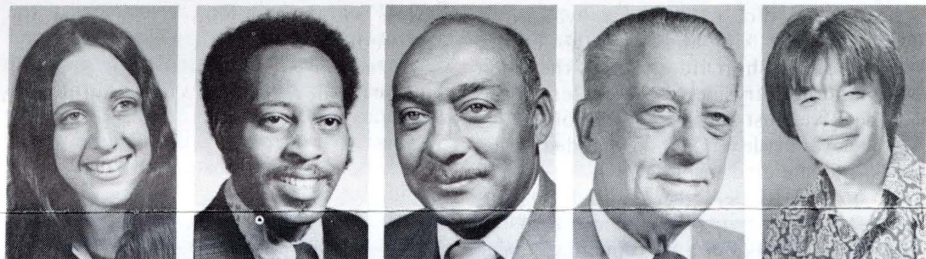
## Artist Creates Works to Mark Associates' Birth

In honor of the tenth anniversary of the Smithsonian Resident Associate Program, Washington artist Gene Davis has been commissioned to create a commemorative work of art that has been produced as a limited edition 30 by 40-inch serigraph of 200 signed and numbered by the artist.

The work has also been reproduced as a 24 by 32-inch poster in a silkscreen edition of 1,000. Two hundred of these will be signed by the artist.

Smithsonian employees are offered the special Resident Associate Member discount price for these works: \$100 for the signed and numbered serigraph; \$20 for the signed silkscreen poster; \$10 for the unsigned silkscreen poster. The work may be viewed and ordered between 10 a.m. and 5 p.m., weekdays, in Room 1271, Arts and Industries Building.

One of Washington's most illustrious artists, Gene Davis is famous throughout the world for his edge-to-edge paintings of multi-color vertical stripes. His works are included in the permanent collections of museums in this country and in the Tate Gallery, London. In addition, he has been represented by one-man shows at the Corcoran Gallery of Art; the San Francisco Museum of Art; the Galerie Ricke, Cologne, Germany; the Stuttgart Museum, Germany; the Frankfurt Museum, Germany; and the Boymans Museum, Rotterdam, Netherlands. He was the subject of a recent film documentary, premiered at the Hirshhorn Museum and Sculpture Garden last fall.



**EEO COUNSELORS** — Five Smithsonian employees have recently joined the Equal Opportunity program as counselors: (from left) Melanie R. Bond and Thomas E. Miller from the National Zoological Park; Robert G. Myers, Office of Printing and Photographic Services; Franklin B. Bruns, Jr., Division of Postal History, National Museum of History and Technology, and Allan Kaneshiro, National Collection of Fine Arts. The Counselors, who are permanent employees with other assigned duties, aim informally to resolve complaints of discrimination brought to them by persons who seek their guidance.

## SI Photographers Complete Folklife Festival Workshop

A group of photographers from the Office of Printing and Photographic Services has completed a color photojournalism workshop during which they photographed the recent Festival of American Folklife.

Arthur L. Gauth, director of OPSP, reported that the workshop was instructed by noted freelance photojournalist Fred Ward. Mr. Ward is represented by the Black Star Agency and appears regularly in *National Geographic* and similar publications. He recently published *Portrait of a President*, a detailed photographic book giving an intimate view of the first days of the Ford Administration.

Mr. Gauth said the OPSP workshop program was conducted in two parts, June 3-6, and July 2-5, and was coordinated by Jim Wallace, his special assistant.

"This workshop included an intensive series of the techniques of photojournalism and its application," Mr. Wallace said. "Mr. Ward not only spent time discussing the taking of good photographs, but also gave actual assignments on the Mall which were photographed, processed overnight by the OPSP color laboratory and then critiqued the next day."

While the workshop technique is not new this is believed to be the first time such a program has been conducted with a group of Civil Service photographers representing the same office.

During the second part of the workshop, assignments were designed to provide a complete photographic portrait of the Festival. Each photographer was assigned a different area each day, giving a variety of views and photographic approaches to each subject.

In addition to providing coverage of the Festival, the workshop was an integral part of the OPSP training program.

Those enrolled in one or both parts of the workshop were John Wooten, Danny Thompson, Doc Dougherty, Dwight Bowman, Chip Clark, Richard Farrar, Vincent Connolly and Harry Neufeld. Peggy Kauders, a volunteer working with OPSP for the summer, also attended.

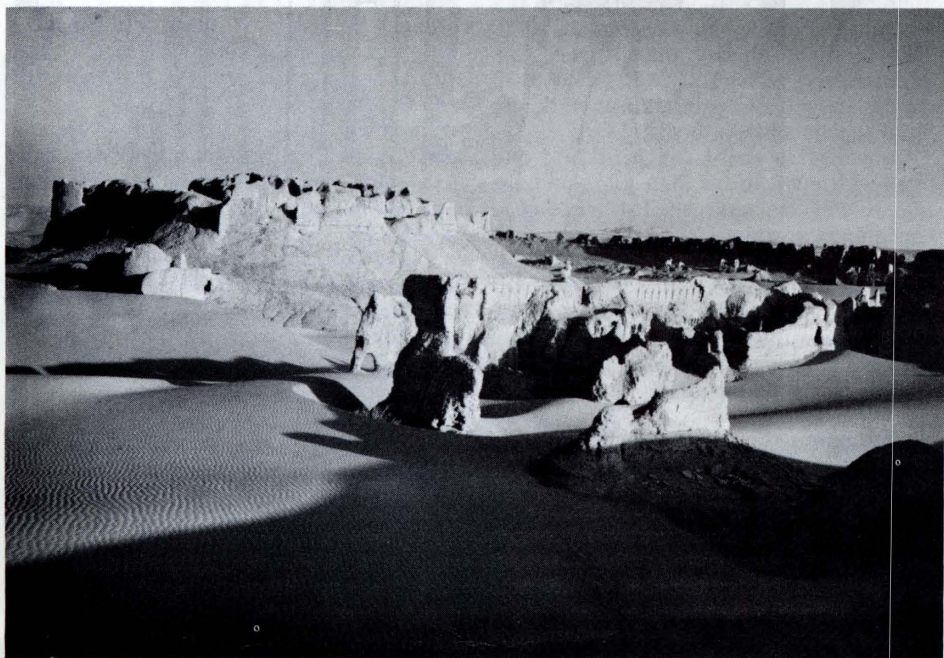
Additional photographic equipment loaned to OPSP by Nikon, Inc., especially for the workshop enabled the Office to field a larger number of photographers than usual for the program.

The workshop assignments were photographed entirely on 35 millimeter color transparencies. Overnight processing was completed by Lorie Aceto and Joe Goulait of the OPSP color lab.

### Jones Attends Conference

Sterling Jones, Assistant Chief of the Laboratory Branch of OPSP, recently attended a one-week conference at the Winona School of Professional Photography, Winona Lake, Ind., where he studied photographic department management and control.

The conference was designed to update skills of professional photographers and acquaint them with the latest in materials, equipment and techniques.



The buried city of Sar-O-Tar in Afghanistan.





**CERTIFICATES OF TRAINING PRESENTED** — Following 12 weeks of training in trades helper skills, these National Zoological Park participants were presented certificates of training in various fields. Recipients of certificates were (from left, standing next to James Pearson, Training Coordinator) Johnny Brown, Masonry Worker Helper; Robert Wooten, Welding Worker Helper; Amuel Mason, Electrical Worker Helper; (front row) Emanuel Calloway, Junior Pipefitter and Gregory Davis, Metal Worker Helper. Reginald Dunlap, Utility Systems Repairer-Operator Helper, was absent when the photo was taken.

## CBCES Educational Center Dedicated

From Page 2

programs for local children and adults, we are striving to fulfill our objectives."

Recently, CBCES initiated a large scale model field trip program in outdoor education. In this program, teachers are given brochures which completely outline an outdoor activity, including background information and follow-up activities for the children; they are then encouraged to lead field trips at an outdoor facility such as CBCES without depending on "an expert." This approach promotes increased learning on the part of the children by insuring activities relating to the outdoor experience before and after the visit.

Efforts are also being made to develop a model Outdoor Environmental Education Program for Adults. CBCES staff are exploring ways of working with adults that transcend traditional lectures and nature walks. In addition, the Center had formed a coalition on adult environmental education with the National Park Service and the National Audubon Society.

Another area of involvement is with developing environmental activities through the Outdoor Biology Instructional Strategies project. The Center received a National Science Foundation grant designed to implement OBIS within out-of-school institutions. CBCES was also designated as an OBIS National Field Center.

OBIS is an outdoor biology program that gives young people between the ages of ten and 15 years the experience of observing and investigating organisms and events in the out-of-doors. Under the NSF grant, the Center is conducting instructional workshops on OBIS activities for elementary and junior high school teachers, summer day camp directors, and high school students.

For the third year a summer ecology program for children in grades 3 through 9 was operated at CBCES. A major objective of this program is to train college students in outdoor education techniques.

In previous years, the Summer Ecology Program was conducted at the Center's research facilities. This year, college students are taking the program to the children. Each week they will work in a different local community teaching the children of those communities about "the ecology of their own backyard."

In the fall of 1975, the Center will inaugurate a work/learn program in Environmental Studies. Six students, selected from a nationwide competition, will work with several members of CBCES's professional staff on projects such as forest succession, estuarine ecology and environmental education. This work/learn program will provide these students with a unique opportunity to do concentrated work in their own area under expert supervision and to participate in the full range of environmental studies at the Center.

After the Education Program had been described, Dr. Challinor outlined the Center's scientific research program in

terrestrial and aquatic ecology. The core of the Center's research effort is the Rhode River Program — a long term study of the relationships between man's activities and his environment. At present, scientists are continually monitoring, with automated methods, various aspects of man's activities on over two-thirds of the Rhode River watershed. It is the most extensive study of its kind underway on an estuarine system in the United States. This project is closely coordinated with a similar study being conducted at the Smithsonian's Tropical Research Institute in Panama. Smithsonian scientists are examining the similarities and differences between temperate zone ecosystems on the Rhode River and tropical zone ecosystems in Panama.

CBCES has also done research on more immediate problems affecting the Chesapeake Bay. As a member of the Chesapeake Research Consortium (CRC), the Smithsonian has been collaborating with the University of Maryland, The Johns Hopkins University, and the Virginia Institute of Marine Science on bay-wide research problems. CRC research projects include the effects of Hurricane Agnes on the Chesapeake Bay, the impact of sewerage and other contaminants on the Bay's ecosystem and the status of the Bay's wetlands and marshes.

In the future, the Center plans to continue and expand its research on estuarine systems. There will also be opportunities to study the ever-changing mosaic of forests, fields, farms and human settlements of the Rhode River watershed.

Dr. Challinor concluded, "These opportunities will challenge the curiosity and creativity of scholars for years to come and this challenge is the foundation of science in the Smithsonian. We look forward, therefore, with a great deal of excitement, to the future development of the Chesapeake Bay Center."

## Air and Space Garage

The underground parking area at the Institution's new National Air and Space Museum opened to the public July 28.

The garage is provided for the convenience of visitors to museums on the Mall, and rates are structured to discourage all-day parking. Motorists using the facility will be charged 65 cents an hour for the first three hours, and \$1 an hour thereafter, with no maximum.

Thus, someone parking there for seven consecutive hours would be charged \$1.95 for the first three hours and \$4 for the next four hours, for a total of \$5.95.

The garage entrance is on Seventh Street, between Independence Avenue and Jefferson Drive. It will be open seven days a week, 7 a.m. to 10 p.m. April through August, and 7 a.m. to 7 p.m. September through March.

## Scholars, Scientists Gather For Work as Smithsonian Fellows

Visiting scholars and scientists from around the United States and abroad are among Smithsonian Fellows now arriving for the 1975-76 academic year.

They will pursue their research in association with research staff members of Smithsonian museums, laboratories, field stations and other facilities.

Twenty-five predoctoral Fellows will conduct research for their dissertations, and 18 postdoctoral Fellows, investigators who have received a degree within the last five years, will work on projects of their choosing.

In all cases Fellows will be engaged in

research and study which is closely allied with research interests of Smithsonian faculty. Fellows will be working in virtually every area of research in the Institution, and are eager to meet and talk with people at the Smithsonian about mutual interests.

Anyone who wishes more information about this year's Fellows is invited to telephone Ed Davidson or Gretchen Gayle on Extension 5071, or to stop in at the Office of Academic Studies, SI 356. A list of the Fellows, containing brief titles of their research projects and information about where they can be located, is also available from Academic Studies.

## Blitzer, Billington Named as Members Of Exchange Board

Charles Blitzer, Smithsonian's Assistant Secretary for History and Art, and James H. Billington, Director of the Woodrow Wilson International Center for Scholars, have been named members of a special advisory committee for the 30th anniversary Bicentennial project sponsored by the Board of Foreign Scholarships.

This presidentially-appointed board administers the worldwide educational exchange program under the Fulbright-Hays Act and is chaired by former Sen. J. William Fulbright, author of the legislation which initiated the program 30 years ago.

The Bicentennial project, "International Education: Link for Human Understanding," will have as its primary objectives a review of the impact of international educational exchange and consideration of its future role in the development of a world community. Funded by the Department of State, the project will be administered through the Institute of International Education.



**MRS. INGRAHAM HONORED** — Mrs. Mary Ingraham, a veteran editor at the Smithsonian Institution Press, was honored June 27 at a retirement party by fellow workers. Mrs. Ingraham is holding a copy of *Official White House China*, a new publication which was presented to her along with a large silver bowl as a going-away present. She had been at the Smithsonian since April 23, 1958, and was recently an editor of scientific papers with concentration in the field of botany.

## NMHT Acquires 99-Year-Old Locomotive for '76 Display

The Smithsonian's National Museum of History and Technology has acquired a 99-year-old "American type" steam locomotive whose kind dominated the nation's railways in the 19th Century.

Built in Philadelphia in 1876 as a wood-burner, the engine is one of about 25 of its type known to exist, of approximately 25,000 that were manufactured.

Finding this classic locomotive, which saw service in Guatemala as recently as the 1950s, ended a 15-year search by John H. White, NMHT Curator of Transportation.

The engine is considered a classic American type because of its wheel arrangement of four leading wheels and four driving wheels. The system, developed in the U. S., enabled such locomotives to negotiate uneven tracks and sharp curves that were characteristic of railroads then.

The engine, "No. 84," will be restored for display in "1876: A Centennial Exhibition," a Bicentennial retrospective that opens in May, 1976, in the Arts and Industries Building as a re-creation of the spirit and tone of the Philadelphia Centennial.

Restoration, already underway at the Smithsonian's Silver Hill, Md., facility, will require hours of painstaking work by Smithsonian conservators.

Converted to coal-burning in 1915 and fitted with an oil burner three years later, the engine will be returned to its original appearance, as will the locomotive's wooden cab. "No. 84's" metal cow-catcher, a modern substitute for the original one, will be replaced as well. When other repairs are done, the locomotive will be elegantly refinished with gold leaf lettering and striping.

Built by the Baldwin Locomotive Works

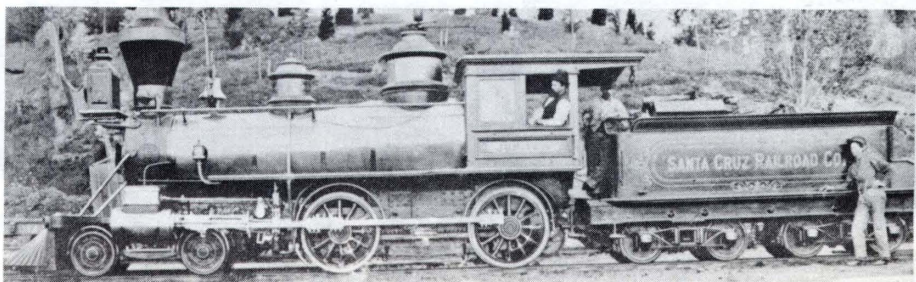
of Philadelphia, "No. 84" began service on the Santa Cruz Railroad of California as the *Jupiter* (No. 3). It was sent to the Guatemala Central Railroad in 1885, later serving on the successor line, the International Railway of Central America. The engine last worked on the I.R.C.A.'s Ocos Branch in Northwestern Guatemala.

The Smithsonian's long search for an American type locomotive touched railroad companies and private collectors throughout the United States and in Central and South America. In 1960, White tried to obtain "No. 84" from the I.R.C.A., but learned that there were plans to sell it to a private collector. Unable to complete the deal, the I.R.C.A. returned "No. 84" to storage.

Several years later, title to the I.R.C.A. came into the hands of O. Roy Chalk, then President of the D. C. Transit Company. He brought "No. 84" to Washington, for display with vintage street cars, fire engines and airplanes on the Kennedy Playground at 7th and O Streets, N.W. in 1964.

Learning that "No. 84" was on the playground, Curator White urged Mr. Chalk to donate the historic locomotive to the Smithsonian and save it from eventual deterioration in its outdoor setting.

Mr. Chalk agreed, provided that another engine could be found for the playground, and a small industrial engine of more modest historical value was obtained from Dr. Stanley A. Groman, founder of the Rail City Museum, Sandy Creek, N.Y.



No. 84 as it appeared about 1880.