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 Smithsonian funds. He suggested that the money be used to construct, equip, and staff an astronomical observatory in order to produce a "systematic and continuous scientific series of observations on the phenomena of the numberless worlds suspended over our heads — the sublunary 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 Smithsonian funds. His effort failed because, as he explained, when 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 Associate 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 calls our bodies into being, and when it goes out we shall go too. What is it? How 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.

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 meteoric 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, Basso in Algeria, Calama in Chile, Mount Monteaux in Chile, Burro Mountain in New Mexico, and Mount Sant Katerina in Egypt's Sinai Peninsula near the ancient city of Ptolemais.

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 norm 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 a bolometer once housed in the frame building to a 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 calculations of the power of the sun's rays 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 aboard orbiting solar observatories and other space probes.

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 deal of the Smithsonian's work. A similar sunburst was part of the crest of Sir Hugh Smithson, father of James Smithson who founded the Institution. The crest include the figure of a red demi-lion holding in its paws the sun "in splendor" so as to pass forth through successive generations and historical events as a gift to be inherited 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.

The Arts & Industries Building was closed to the public August 1 for renovation and installation of the "1876" Benetoriental ex-
hibit there.

It is 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 and Space Museum, will appear in the next issue of the TOCHR. Mr. Garber will discuss the relevance to aviation history of the two-story building in the South Yard. In this article early experiments in preparing specimens carried out in the buildings behind the Smithsonian cas-
tle are reviewed.

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.

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, containing 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 behind it.

Although the buildings to be razed present an undistinguished appearance, they are of considerable historic significance and will remain behind the castle at the west end of the present lot, comprising the 200 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 driver to each area in the affected area. They were told to contact the Parking Coordinator, Mary Rakow, in Room 2446 at the Arts and Industries Building (Extension 5484), from 10 to 2 Monday, Tuesday and from 3 to 5, seven days July 28 through August 13. 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

For the last 25 years the soon-to-be-torn-down South Yard has housed the "Bug House," and this August 18 it will be replaced by the newer and more permanent Home of Entomology and Entomology Bicentennial exhibits.

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

"People come in here little by little," said Mr. Biggs, who opened the first floor for the dissection and preparation of insects in the windowless "castle" or "annex.

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 Home of Entomology 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 are every scrap of flesh off small skeletons. Each month a new colony of 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 National Museum of Natural History Building. Above, Frank Greenstell, superintendent of the NMNH Division of Mammals, checks to see how the beetles are faring in their new Victorian Garden compartment.

Mr. Greenstell is laying the foundation on a new two-story Open Preparation Annex, one floor for the beetles, of course, and 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.
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 is faced with 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) or the Government's Employment 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 Coordinators serve as a two-way communication link, informing us of training needs and activities in their unit and receiving from us information on training which is then passed on to their 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 an enormous amount of time required for such counselling. Nevertheless, it is one of the services that we consider important enough to warrant the extra effort on our part.

The Training Office serves the needs of employees as well as the needs of the Institution. The Training Office would only check the course or courses to ensure that they are within guidelines expressed in SI policies. This service is a valuable one and one that is highly regarded by those who use it.

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 the New Jersey Agricultural College 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 special interest is exotic animal medicine, especially avian and reptilian.

Early this year the Zoo established a Smithso­nian Research Foundation, an internship and training oppor­tunity for recent graduates of schools of veterinary medicine who are interested in the practice of exotic animal medicine. Selection was made on the basis of academic record, recommendations and interest in exotic animal medicine.

In his 15-month period of residence, 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 small feral of comparative animal medicine.

Lang J oins 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 J.D. 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 & &dquo;Peter McFall.&dquo; He has also served as an administrative judge, specializing in trademark and copyright law.

FIRST LADY AT THE RENWICK — Mrs. Gerald Ford visited the Renwick twice within a month, 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, accompanied by NCF Director Carol C. Taylor and Stadtner Director Lloyd--Herman, she previewed the "Craft Multiples" show. Although scheduled for a 30-minute tour, she stayed the full hour, asking interested and well-informed questions. When she was puzzled by the inclusion of some pillows in the show, Dr. Taylor explained that woven yarndage 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

Archaeologists 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 Afghan 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 archaeologists, no matter how impeccable their credentials.

Dr. Trousdale is philosophical about this fact of life, even though the rules and regulations can occasionally be onerous. 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 archaeologists dug with little regard for the preservation of important cultural remains. They found them in great numbers. But in doing so they let a lot of important monuments in ruins. Now the country is saying that if an archaeologist wants to dig a site he should also share the responsibility for restoring and preserving what he uncovers."

Preservation is only one problem. The hazards of the20.

The city of Sar-O-Tar is the largest ruin in the region and the site on which Dr. Trousdale's project has focused since 1973. Inside its 80-foot-high walls and moats were richly decorated 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 basin, a region distant. Political decline followed and then came the sand. The wind blew deposits out of ancient lake beds which had filled the region under dunes 25 to 60 feet high.

Tar's Fate soaring arches, grand courtyards and pools.

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

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

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 silkscreen 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 the works: $100 for the signed silkscreen poster; $20 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 Rake, Cologne, Germany; the National Museum of Art; the Galerie Ricke, Cologne, Germany; the National Museum of Art; and the National Museum of American Art.

Throughout his long and productive career, Davis has been the recipient of numerous prizes and awards, including the 1974 Artist of the Year Award presented by the National Guild of Hypnotherapists; the 1976 Honorable Mention Art Award presented by the Museum of Modern Art; the 1978 Award of Excellence presented by the Smithsonian Institution; and the 1979 Outstanding Artist Award presented by the New York City Council. He has also been the recipient of numerous grants and awards from the National Endowment for the Arts, the National Council on the Arts, and the National Endowment for the Humanities.

Davis received his BFA from the University of Arkansas and his MFA from the University of Iowa. He has taught at the University of California, Berkeley, the University of Chicago, and the University of California, Los Angeles. He has also been a visiting artist at the University of California, Santa Barbara, and the University of California, Los Angeles. He has been the recipient of numerous grants and awards from the National Endowment for the Arts, the National Council on the Arts, and the National Endowment for the Humanities.

In addition to providing coverage of the Festival, the workshop was an integral part of the Smithsonian Folklife Program.

Those enrolled in one or both parts of the workshop were John Wooten, Danny Thomas, Joe Garrow, Michael Beebe, William Jones, Assistant Chief of the Communications Division, and Peggy Kauders, a volunteer working with OPPS for the summer, also attended.

Additional photographic equipment loaned to OPPS by Nikon, Inc., especially for the workshop, placed the Office in a larger number of photographers than usual for the Festival.

The workshop assignments were photographed entirely on 35 millimeter color film and were processed and cataloged by OPPS personnel. One photograph, a limited edition of 10, was completed by Loretto R. Austen and Joe Gcoalit of the OFFS color lab.

Mrs. Austin

Artist Creates Works for Smithsonian Associates' Birth
Scholars, Scientists Gather For Work as Smithsonian Fellows

Visiting scholars and scientists from around the United States and abroad arrive at the Smithsonian Institution to work alongside members of the Institution's diverse research staff. Fellows work in virtually every area of research in the Institution, and are eager to meet and talk with people at the Smithsonian about mutual interests. Additional 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, S1 366. 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 Bicentennial Advisory Committee for the 30th anniversary Bicentennial project sponsored by the Board of Foreign Scholarships.

This presidially-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 created the program in the 1946 foreign policy act.

The Bicentennial project, "International Education: Link for Human Understanding," will have as its 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.

MNH 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 railroads in the 19th century. Designed in Philadelphia in 1875 as a wood-burner, the engine is one of about 25 of its type known to exist today, and is estimated to be worth about $25,000.

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

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 and as a re-creation for the celebration of the dawn of the Philadelphia Centennial.

Restoration, already underway at the Smithsonian's Silver Spring 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. A "No. 84" metal cow-catcher, a modern substitute for the original one, will be replaced. When other repairs are done, the locomotive will be elegantly refinished with gold leaf lettering and striping.

Builded 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 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 Chalk Company. He brought "No. 84" to Washington, for display with vintage street cars, fire engines and airplanes at the Kennedy Playground at 7th and O Streets, N.W. in 1964.

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