THE SMITHSONIAN ORCHID
Smithsonian Institution, Washington, D.C.
August 1975

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 is announced that the rotunda area and portions of the halls where construction is underway will be closed to all persons 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, who will appear in the first issue of THE TORCH. Mr. Garber will discuss the importance of the construction of the Smithsonian's second-story building in the South Yard. This early article experiments in determining the influence of the building's design upon the buildings behind the Smithsonian castle are reviewed.

Those Simple Structures

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 numbers worlds suspended over our heads"-the subdivision of all physical sciences, and that in which the field of future discovery is "unbounded as the universe itself." At that time no observatory facility was to be found anywhere in the country. A few years earlier George Ross, 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 Congress, charged with the responsibility of determining what the Institution was to be, was uncertain how to proceed. Adams finally resigned, and in 1846 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 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 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" on the grounds of the Smithsonian in 1839 and early 1840.

"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. For 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 meteorological documentation in the sun's output of energy led to the establishment of observatories far away from Washington at remote places such as Mount Whitney and Tahiti Mountain in California, Bussor in Algeria, Calama in Chile, Burro Mountain in New Mexico, and Mount Saint Katherine on Egypt's Sinai Peninsula. Partial altitude observations were compared with each other to determine the actual emission of the sun and its power of 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 very well-endoed 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 single meter once housed in the frame buildings of the South Yard to the multi-mirrored telescope at Mt. Hopkins Observatory and instruments orbiting solar observatories and other space probes.

A 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 and out of this, Langley directed toward the gift of atmospheric flight; through altitude observations to produce data basic to meteorological study; through trials of solar radiation to produce data basic to meteorological study.
About SI Women

Training Office Services 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 the needs of Smithsonian employees in many ways. Some

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 University of Florida 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 special interest is exotic animal medicine, especially avian and reptilian.

Early this year the Zoo established the 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 diagnostics. Cooperative programs with George Washington University Medical School, the University of Maryland and Johns Hopkins University will provide an in-depth exposure to small animals 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 Doctor 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, McAfee & Pillsbury in Washington, D.C. He has also served as an assistant U.S. Attorney, specializing in trademark and copyright law.

FIRST LADY AT THE RENWICK — Mrs. Gerald Ford visited the Renwick twice within a 24-hour period — the first time at 10 a.m. on Tuesday, August 6 with Mrs. Warren Rittenhouse, the President's sister-in-law, and Mrs. Elizabeth Norblad, Susan Ford's godmother. On her second visit, escorted by NCF Director Dr. Robert Taylor Rosenberg, Mrs. Ford and Mrs. Lois Herman, 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 of the works, Dr. Taylor explained that woven yardage is difficult to show effectively and thus craftsmen weave pillows to demonstrate their talent.

Dr. Ensley was able to answer Mrs. Ford's question about the history and significance of several of the exhibits.
Dr. Trousdale to Embark on Fifth Expedition to Buried Asian City

Archaeologists returning to the field are men burdened by dust 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.

Dr. Trousdale heads up the Asia department of the institute in Kabul, where he is in the middle of project fieldwork 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.

"Cradle of Asia"

Despite its inhospitality to life the region is extraordinarily rich archaeologically. Islamic ruins are scattered everywhere over the 500 square miles of the Sistan desert. Most of them date to a period between 1000 and 1200 A.D. and this area supported a population of hundreds of thousands. It is a region of extraordinary archaeological interest. In the past 3000 years the area has cleared itself of sand and been reoccupied by man.

The city of Sar-O-Tar is the largest ruin in the region and the site on which Dr. Trousdale's project has focused. It was built in the 4th century B.C. and he is only one of three to be excavated. The area is nearly 500 miles away from the Helmand River where the Afghan population of Sar-O-Tar was occupied can be accounted for by the fact that the Helmand River is the only large river in the country.

The city, as it appears today, was built in the 13th century when it was sacked by Genghis Khan. The city's buildings were destroyed from the city and its outlying region with water from the Helmand River.

The city is named for the Sar-O-Tar region that still stands uncovered by sand dunes. It is 40 miles away from the Helmand River where the Afghan population of Sar-O-Tar was occupied can be accounted for by the fact that the Helmand River is the only large river in the country.

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Blitzer, Billington named as Members of Exchange Board

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, and 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, Curator of Transportation at the Smithsonian. The engine is considered a classic American type because of its wheel arrange- ment 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. It will be joined in time and theme by another locomotive, the United States 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 Ocoa Branch in Northwestern Argentina.

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, the Smithsonian Institution Press, was honored with the term Environmental Studies.