Christmas at Smithsonian:
Masques, Mimes, Toyland

by Mary M. Krug

Traditional holiday observances sponsored by the Museum Shops and the Division of Performing Arts will highlight the Christmas season at the Smithsonian. A "Fantasyland of Toys," gathered from around the world, is the Shops' December sales exhibition. "Masques, Mimes, and Miracles," a ten-day Christmas festival, will be staged by the Division of Performing Arts.

The Shops will open their fantasyland December 4 with a 5:30 to 7 p.m. reception for employees, followed by a similar event for Associates. The exhibition's international theme will be carried through by by children in native dress and traditional carols also provided by the embassies.

A large Christmas tree decorated with toys from the sales collection will dominate the show in the MHT first floor lounge. It will be surrounded by smaller trees trimmed in the styles of various nations. Antique toys from the cultural and political history collections will also be on display.

Items from Japan, India, Germany, the United States, England, France, Latin America, Greece, Spain, Italy, Scandinavia and Africa have been gathered for the show. The usual 20 percent employee discount will apply. Exhibition designer is Mike Carrigan.

The Performing Arts Division's festival is based on old Stuart court pageants staged for the 12 days of Christmas. Two performances daily will be given in the Iron and Steel Hall, MHT, from December 27 through 30 and from January 2 through 6, plus a special performance for Associates December 26. The complete show will be presented at 4:30 and 6 p.m. They will feature such characters as Father Christmas and children in Misirale, clowns and English country damsels.

The Recreation Association's Smith­sonian Singers, under the direction of exhibits specialist Toussaint Wallace, will make their first appearance December 21 at 3 p.m. with a program of seasonal music in the MNH Rotunda. They will also carol through the corridors of office areas.

Rebecca F. Eisenberg of the National Zoo are examining as possible carriers of viruses. Bird species being trapped, banded, and examined as possible car­riers for fiscal 1968, the Smithsonian is participating in archeological and biological projects generated by the sale of surplus funds support. These three recent projects have one thing in common: they were financed by the Smithsonian Office of International Operations for the 12 days of Christmas. Two performances daily will be given in the Iron and Steel Hall, MHT, from December 27 through 30 and from January 2 through 6, plus a special performance for Associates December 26. The complete show will be presented at 4:30 and 6 p.m. They will feature such characters as Father Christmas and children in Misirale, clowns and English country damsels.

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Buechner and Eisenberg are studying the movements, behavior, and habits of the Ceylonese elephant to learn what will be useful in establishing reserves to protect the species. Tropical biologist Fosberg is leading an investigative team studying the vegetation on which the elephants depend for survival in that southeast Asia coun­try. Dr. William H. Klein, director of the Radiation Biology Laboratory, has set up sophisticated and sensitive equipment in Israel for solar radiation measurement under the geographic and climatic conditions in that part of the world. Smithsonian anthropologists Clifford Evans and Geo Van Beek are doing studies in Iran, Pakistan and Ceylon of rapidly disappearing crafts and indus­tries reflecting ten thousand years of history. An oceanographic sorting center was established in Tunisia under the program. MNH oceanographers are also working with Israeli scientists in a study of marine organisms moving between the Mediterranean and the Indian Ocean through the Suez Canal.

In the administration of the overall Smithsonian program, special emphasis has been placed on supporting archeological and biological projects in countries where American institutions have had minimal previous opportunity for investi­gation. This was a prime factor in estab­lishment of the American Academy of Benares in India through a grant to the (continued on page 2.)
Foreign Currency Program

American Institute of Indian Studies at Poona, a research center administered by the University of Pennsylvania.

"We look upon this as a very challenging and essential project," says William W. Warner, director of the Smithsonian's Office of International Activities. "Experts have long maintained that the archeology and art history of India are so rich that often the most difficult question is where to begin.

"The Benares Academy seeks to answer this question by conducting long-range surveys which will document, record, and photograph ancient temples and both above-ground and below-ground archeological sites throughout India as a prerequisite to the determination of intelligent research priorities. "By helping to meet a need which might well not be met otherwise, the Benares program in its subject area is typical of the orientation of our efforts around the world across a full spectrum of scholarly research."

As the Smithsonian's Foreign Currency Program has evolved, the Institution has received many expressions of interest and support from American scholars, the Congress, and the United States Embassies abroad. Ambassador Chester Bowles, in a letter to Secretary Ripey, urged the Institution to become more and more involved in promoting archeological studies in India.

Professor Robert Adams, director of the Oriental Institute of the University of Chicago, characterized the program as "a means of furthering the funding overseas research in archeology and related disciplines."

The main responsible for conduct of the program under Mr. Warner, Kenneth B. Schwartz of the Office of International Activities, looks upon it in these terms: "Among other things, the Foreign Currency Program helps to fulfill a much needed demand for the study of changing cultures and conditions that can provide insight into what is happening in the rapidly changing world that we live in today and will be living in tomorrow."

A & I Changes

For the third consecutive year, the A & I now has a chairman. However, no timetable has been established. Frank A. Taylor, director of the U.S. National Museum, has expressed the hope that even before the renovation the West Door can be opened and the park area restored, leading to indoor-outdoor events.

Booking for special exhibitions will be handled by Mr. Taylor's office. First consideration will be given to exhibitions of museum objects sponsored by Smithsonian units. Activities sponsored by outside groups must be approved by an appropriate curator.

The space formerly occupied in A & I by the Petroleum and Steel Hall has been in other use since late summer and will house a SITES show of German posters through Christmas Eve. The old Textile Hall is currently being adapted for "The Lower East Side: Portal to American Life (1870-1924)", sponsored by the Jewish Social Service Agency, which opens December 17. It will be followed by an exhibition of contemporary military art gathered by the National Armed Forces Museum Advisory Board.

The rotunda will be retained as a lounge area used on occasion for exhibitions of a special nature. It has been put to a variety of uses recently including a sales exhibition of Eskimo art, commemorative display on the Erie Canal, and a performance by the Gregg Smith Singers.

Other special exhibitions staged in the building have included a National Co-op Month display and sale, and exhibitions from the Paris Art Show.

NASM, of course, continues to use A & I for some of its most important exhibitions pending construction of the new Air and Space Museum.

Powell Centennial Recalls Scientists' Contributions

The 100th anniversary of Major John Wesley Powell's pioneer exploration of the Colorado River will be observed in 1969 with a national centennial sponsored jointly by the Smithsonian, the Bureau of the Interior, and the National Geographic Society.

In announcing preliminary plans for the celebration, Secretary Ripey said, "It is time to re-focus attention on this truly prescient and classical American hero, not only because of his great exploration into the last of the unknown and unmapped territory of the West—a stunning feat in itself—but for his accumulation of a body of scientific concepts which today serve as guides for some of the Nation's most advanced programs concerning people and their environment.

"The imprint of Powell is everywhere throughout the pages of American science," said Mr. Ripey, said that "at one time of his career Major Powell was both the Director of the Smithsonian's Bureau of American Ethnology and head of the U.S. Geological Survey. As such, he was undoubtedly the most powerful scientist in the Nation's Capital."

"We don't have an ostentatious display of very large diamonds like the British crown jewels," they note, but rather a collection of broad scope and high quality.

The prize specimen, of course, bears both the gemological and numismatic view, is the legendary Hope Diamond, donated by jeweler Harry Winston of New York. This diamond has been drawing millions of visitors for the past nine years, but surprisingly actually became Smithsonian property only last month. An agreement with Mr. Winston for tax purposes turned one tenth of the stone over to the Institution each year, with the final tenth in November.

"I'll always remember that date—November 10, 1958," says Dr. Switzer of the day the Hope came to SI. "I might forget my wedding anniversary, but I'll remember that. Everything else almost seems anticlimactic after it."

Unlike most of the Institution's collections, the primary purpose of the gems is for public display rather than research. To use a rare and beautiful gem like the spectacular Rosser Reeves star ruby for research would destroy its value, the men point out.

When adding a stone to the collection, Switzer and Desanthes look for perfection, size, and rarity. Two topaz specimens recently acquired fit all three categories beautifully. Among the largest and most perfect topaz crystals in the world, they weigh 70 and 111 pounds.

Beauty and durability are essential for a gem. Of some 2,000 mineral species, only a comparatively few meet the requirements. About 20 are in common use as jewels. Perhaps 80 others could qualify, and MNH also owns with the tax law still allowed a giver to contribute a gem appraised at current market value and not turn it over to the Smithsonian until death.

In any discussion of such valuable gems, the questions of insurance and security inevitably come up. Surprisingly, the entire collection is uninsured, because no government property is insured: "We can't even buy the insurance for items on loan, putting us in the embarrassing position of asking the lender to provide insurance at our own expense."

When the million-dollar Lesotho diamond was lent to the Institution by Mr. Winston last month, Dr. Switzer brought it to the presentation ceremony in his pocket—"the safest place for it," he explained. It had been brought from New York by courier the same day.

The Hope Diamond came to Washington by registered mail. But when it went to Paris on special exhibition, it made the whole trip in Switzer's pocket, and came back the same way with Assistant Secretary James Bradley.

"Reasonable security precautions" are taken with the gems in exhibition. But maximum safety would require that the gems be locked in the vaults and not shown at all to the public—a course that has never been considered appropriate for the most impressive gem collection in the museum world.

[Editor's note: continued from page 1.]

"The staff of the Division of Musical Instruments of the Smithsonian Institution consists of a group of dedicated, scholarly museum workers ever since it was established in 1900, until Charles Addams came into their lives."

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Decimal, 1967

December,
Soviet Probe Results Support Sagan View of Venus by Jim Cornell

The starting description of Venus as a blazing oven surrounded by cool vapors relayed to Earth from the Soviet's Venus probe surprised many scientists—but not Carl Sagan of the Smithsonian Astrophysical Observatory and Harvard. For the past ten years, Dr. Sagan, an expert in planetary environments, has argued that the surface of Venus would be extremely hot because its carbon dioxide, water vapor, and clouds created an atmospheric "greenhouse effect." This prediction now seems confirmed by the recent Russian findings.

Dr. Sagan explains that the method of developing his theoretical picture of the Venus environment was much like that used by a detective in solving a crime. Since 1956, Venus, our nearest and most similar planetary neighbor, has become known to be an intense source of radio emissions. Indeed, the planet emitted radiation as if it had an average surface temperature of 600° or 700° F. Many scientists, however, were unwilling to accept this thermal, or "hot surface," explanation. Instead, many investigators suggested the Venus clouds or ionosphere as probable sources of the radio emissions. Sagan, however, suspected the surface was the real culprit; and, in the style of a good detective, he attempted to test the "hot-surface" theory by seeing if the other suspects could be eliminated.

"We had wide range of radio, radar, infrared, and optical information about the planet," says Sagan. "And it seemed to me that there was enough information available to solve the problem.

"In all cases, the non-thermal theoretical models were inconsistent with one another and the actual observations," he says. "But the idea that the radio emissions were coming from the planet itself seemed to agree perfectly with all the observations."

In addition to the radio observations, Sagan found other evidence supporting his high-temperature surface hypotheses. For example, the radar diameter of the planet is known to be smaller than the optical diameter of the planet. Ordinary telescopes are the planet plus its clouds. Radar "sees" only the solid body. From this difference, Dr. Sagan was able to estimate the distance from the top of the clouds to the surface of Venus.

"Because he knew the temperature of the cloudtops and had some idea of lower atmosphere conditions, he was able to derive theoretical surface temperatures that agreed with temperatures implied by the microwave observations," says Sagan. "It seemed to me that the planet's surface should have such high temperatures, Sagan ascribed to the "greenhouse effect." The carbon dioxide and water vapor in the atmosphere act like the glass in earthly hothouses. Sunlight passes through the atmosphere and clouds to the surface, but infrared radiation is trapped beneath the clouds, building up intense surface heat.

In collaboration with Smithsonian scientist Dr. James B. Pollack, Sagan was able to show that the "greenhouse effect" could take place only if a few tenths of a percent of water vapor were present in the atmosphere. The Soviet Venus capsule reported finding just this amount of water vapor.

The Russian results thus apparently confirmed not only the high surface temperature, but the "greenhouse model" as well. The American response ran: "We spent years eliminating suspects and checking alibis until we were reasonably sure we had the answer. Now it's as if the principal suspect confessed and a hundred eye-witnesses suddenly appeared."

Life Around Venus? Although the recent investigations of Venus have apparently confirmed Carl Sagan's theory that Venus is too hot for known life-forms, he is still optimistic that a special type of creature might dwell there.

Little gas-bags which thrive on water, carbon dioxide, minerals, and sunlight may be floating in the clouds that surround the bright planet.

Dr. Harold Morowitz of Yale University presented this intriguing idea in a recent issue of the British scientific journal, Nature.

While space probes have indicated that surface temperatures of the planet may reach 400° F., the temperatures in the developing cloud layer range from 40° F. at the bottom to about minus 80° F. at the top—a range in which life easily could exist.

According to Sagan and Morowitz, if these clouds contain the "prerequisites for photosynthesis" (water, carbon dioxide, and sunlight) and if small amounts of minerals are blown upward from the planet's surface, then "it is by no means difficult to imagine an indigenous biology in the clouds of Venus."

One such form of cloud-life might be little, round, hydrogen-filled gas bags the size of ping-pong balls or "much larger" floating "just below the Venus clouds, or in the lower cloud-deck."

These gas bags could live, they speculate, by the same kind of photosynthesis that ultimately makes possible all life on earth. Water and carbon dioxide could be absorbed from the surrounding clouds and atmosphere with minerals "exposed on the sticky underside of the organism, and ... ingested and power for the transforming processes supplied by sunlight.

The conditions in the lower clouds of Venus are more Earth-like than any other extraterrestrial environment now known. "It is possible that life arose under more moderate conditions on the surface of Venus in its early history. For example, the surface may have been much more precipitously less degassed than it is today, with an atmospheric greenhouse much less effective than the contemporary one... Outgassing advanced, surface temperatures rose, and the surface became more arid and inclement. Organisms may have been emigrated to the clouds, and may there have awaiting the first biological experiments to be performed in the vicinity of the Venus clouds."

Shortly after the U.S. fly-by of Venus, it might be noted, the New York Times reported that the Marine V had sighted some "unexplainable clumps" in the surrounding atmosphere. Could it possibly be that...?
Secretary Ripley Discusses Variety of SI Topics

December, 1967

SECRETARY RIPLEY: I have a strong sense of history in this large museum. In 1846 Joseph Henry came to head the Smithsonian. And one of the first things he noted in his little pocketbook, which he carried everywhere with him, was that the buildings were leaking and every time he walked in they would drip water on his head. He was a man who lived in the nation. What does that mean? It seems to me that it was a significant and far-reaching approach to open it to the public, perhaps not directly but indirectly, a way to bring a sense of real enthusiasm and excitement into the atmosphere of the Smithsonian. From the beginning, it was the idea that you would have a four-day folk life gala, as it was titled, over the 4th of July weekend. Why did you undertake these projects for the Smithsonian Institution?

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