

New Theory Links Aztecs, Incas to Asia

By Tom Harney

All of the advanced Indian civilizations in the Americas can be traced back to members of a round-headed race who first crossed the Pacific from Asia about 3000 B.C. and established a settlement in what is now Ecuador, according to a recently published Smithsonian Institution anthropological study.

A *Comparison of Formative Cultures in the Americas*—which Smithsonian Institution anthropologists Clifford Evans and Betty Meggers believe to be one of the milestones of modern archeology—is the work of the late Florida State Museum anthropologist James A. Ford.

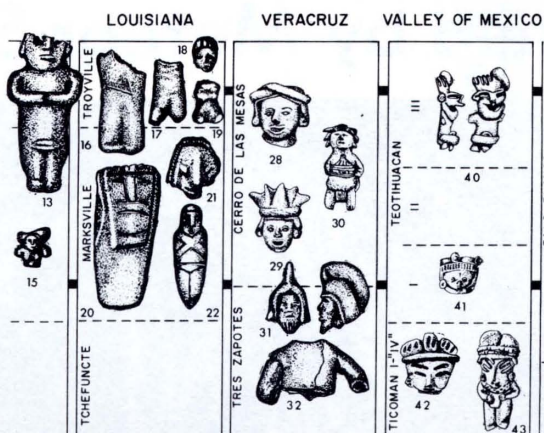
Ford was stricken with cancer while working on his book. He died on Feb. 25, 1968, while the typing was being finished on the final draft of the manuscript.

Ford's theory has had a widespread impact among anthropological scholars but to date has received little or no attention in newspapers and popular magazines.

By comparing similar traits in ceramic art uncovered in archeological sites between coastal Ecuador and the southeastern United States, and tying these comparisons to radiocarbon datings, Ford amassed a body of evidence that ties to a common ancestry the Olmec, Aztec, Inca and Mayan civilizations in South and Middle America and even the Hopewell burial mounds in Ohio.

The chronologies of each of these cultures point back to the arrival of Asians who Ford theorized may have had a seafaring, exploring and colonizing tradition similar to that of the later Vikings and Polynesians.

Ford writes that if he is correct in his thesis, it means that the traditional concept that Aztec and Inca civilizations arose independently of Old World developments is



This is a detail from one of the elaborate charts illustrating James Ford's book on how "round-head" culture developed and diffused in prehistoric America.

wrong. It is likely instead that they were based on the trans-Pacific importation of new knowledge and new techniques that diffused and evolved among the existing population.

Prior to 3000 B.C., the date Ford sets for the beginning of trans-Pacific contacts, the New World is believed to have been thinly populated by nomadic hunters and fishermen who had crossed the Bering Strait land bridge sometime before 12,000 B.C. and spread downward to the tip of South America.

These peoples by 3000 B.C. had formed small villages along the coasts and had begun in some measure to cultivate plants. But there is no evidence of ceramic knowledge, organized community effort, mounds, pyramids, or temple structures like those that became so popular in those regions after 3000 B.C.

The suggestion that knowledge of ceramics may have been introduced to these people about 3000 B.C. by trans-Pacific contact came in 1965 when Smithsonian anthropologists Evans and Meggers, in collaboration with a South American colleague, discovered Japanese influences in pottery from excavations at Valdivia, Ecuador. They theorized that the explanation for this may have been Japanese fishermen landing by accident on the coast of South America after storms had swept them off course.

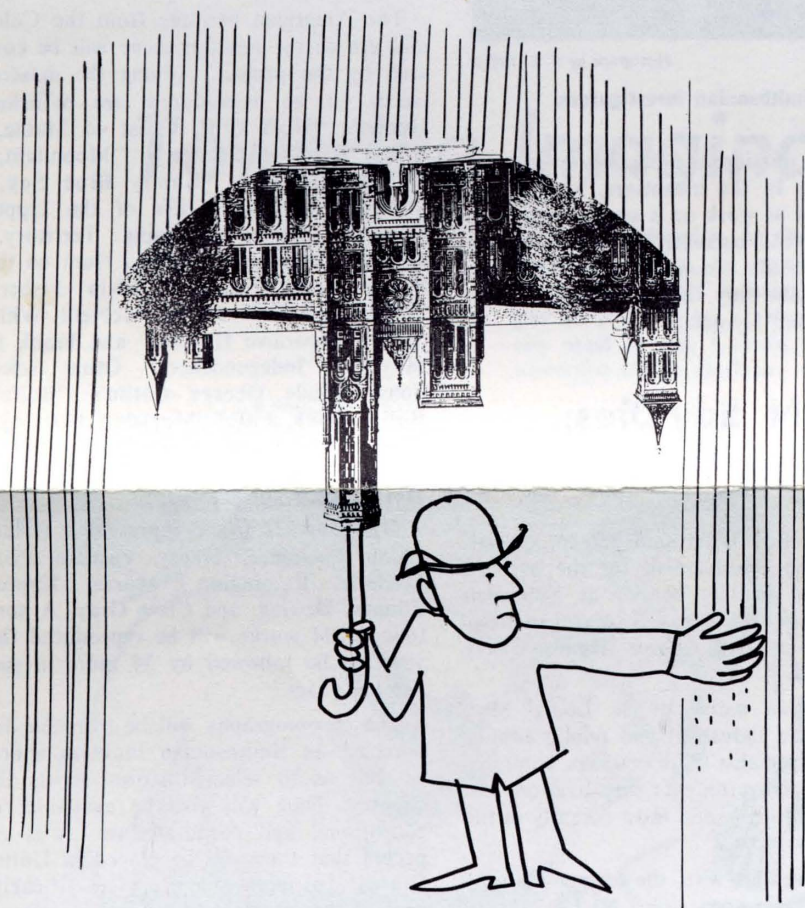
Ford, however, carries this a step further by advancing the theory that the remarkable variety of Valdivia ceramics was evidence of a pottery industry of such considerable scope as to suggest that far more than one skilled craftsman had suddenly arrived in South America.

At the same time he takes note that the skeletal remains found in the strata with the pottery are of a round-headed people, contrasting with the differently shaped skulls that are found in the strata predating 3000 B.C.

The picture that he pieces together is of an exploring and colonizing expedition involving a number of individuals "of both sexes and varied skills."

Nor was there only one such expedition, in Ford's opinion. He cites evidence that there may have been repeated trans-Pacific contacts after 3000 B.C. Another group of round-headed persons, he believes, settled about 2000 B.C. at Machalilla, Ecuador.

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Avast! all who would tamper with yon castle. Unless the tampering is done with the wit of SAO's Jim Cornell. What further wonders can be wrought from Renwick's architecture may be seen on page 3.

4th Kite Carnival Will Again Draw Big(ge) Winner

So popular it has spawned similar events in Baltimore, Richmond, and Philadelphia, the annual Smithsonian Kite Carnival will be held Saturday, April 4 at Fort Washington, a Maryland park.

Paul E. Garber, Ramsey Research Associate at the Smithsonian, will again direct the colorful field day for the Associates. Prizes will be awarded.

Attending will be William Bigge, grand champion flier for the first three carnivals, along with Ilku Set, the young Turkish woman whose skill has set a high standard for the distaff entries.

Garber got ready for the big day with a round of talks and workshops for the benefit of interested fans.

Yale Cites Ripley

Secretary Ripley, class of '36, has received the Yale Bowl award from the Washington, D.C. Yale Club. The award is given an alumnus from the Washington area for "distinguished achievement and service in the highest tradition of Yale University."

THE SMITHSONIAN TORCH

Smithsonian Institution, Washington, D.C.

No. 1, April 1970

Historical Museum Park To Focus on U.S. Revolution

By Mary Krug

The "citizen-soldier" of the American Revolution will be the star of a national historical museum park, according to National Armed Forces Museum Advisory Board plans.

To be known as Bicentennial Park in commemoration of the nation's 200th birthday, the park would be developed on sites already set aside for NAFMAB at Fort Foote in Prince George's County, Md., and across the river at Jones Point in Alexandria, Va.

"In terms of contributions to national development, the citizen-soldier of the Revolution personifies the traditional role

of our armed forces in national defense," says John H. Magruder, NAFMAB Director. "What would be more appropriate, then, than to focus the museum park initially on the American Bicentennial?"

Plans for the park stress not only the military life of the Revolutionary soldier, but also his motives and his background—ethnic, cultural, and religious. Emphasis will be on camp life, with both a summer encampment and winter hut area recreated.

In the encampment, visitors will be able to see all sorts of day-to-day activities performed by the troops as they passed the time between encounters. The Colonial

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Photograph by Harry Neufeld

Elizabeth Reed, wife of the National Zoo Director, poses Moni for press photographers, who journeyed to the Reed home to see the tiger cub, being raised by Mrs. Reed. The young white male cub narrowly escaped death when his mother, Mohini, accidentally crushed three of her cubs during the throes of the stillbirth of yet another cub recently at the Zoo. Moni survived because he was lying apart from his litter mates. The Zoo now has three white tigers, one of the largest collections of white tigers in the world.

'Mini-Moon' Found by Smithsonian Team; Lunar Fragment Formed by Meteor Strike

The Smithsonian's moon rock investigators have found a tiny pellet amidst their Apollo 11 study sample that mimics in its form man's image of the moon.

So unique is the four millimeter in diameter nickel-iron pellet that its photograph was featured on the cover of *Science* magazine's historic Jan. 30 compilation of the first systematic studies of the lunar samples.

The pellet, which NMNH mineralogist Dr. Brian Mason calls a "mini-moon," came to the Smithsonian by accident last October mixed in with a tiny study sample of Apollo 11 lunar particles.

Dr. William Melson, who along with Dr. Mason makes up one of the Smithsonian investigating groups selected by NASA to study the lunar material, was sifting the coarser particles out of the sample when he noticed the pellet. Finding that it was magnetic, he turned it over to Edward P. Henderson, the NMNH Mineral Science Department's expert on metallography.

Henderson found as he studied the pellet that he had something intriguing on his hands—a particle that had been born when a meteoric fragment crashed on the lunar surface, producing a liquid drop, which collapsed and formed a pellet as it cooled in the lunar gravitational field. The pellet had then been cratered by high velocity lunar dust and other fragments until its surface resembled the moon's.

Henderson, along with the other members of NMNH's moon team, Mason, Melson, Kurt Fredriksson, Eugene Jarosewich, and Joseph A. Nelen, are still at work on studies of the pellet and other pieces of their Apollo 11 sample. It's a project that they expect will take years.

"We've only skimmed the surface so far—a good survey job," said Mason.



Photograph by V. E. Krantz

This is the "mini-moon" pellet discovered by Smithsonian investigators.

What the team has learned about the samples to date and the methods and techniques they have used in their analysis will be the subject of an NMNH exhibit early this summer.

By the time the exhibit opens, the Smithsonian scientists will have additional samples in their laboratories from the

Apollo 12 mission and possibly even from Apollo 13. In the meantime, Mason and Melson are at work on a source book that distills all the currently available knowledge about the moon samples. They are writing it not only for geologists but also for interested laymen.

California's Roots

SI Going West In Culture Hunt

The Smithsonian Institution will follow Horace Greeley's famous advice and go west this month.

The Institution is sending six curators from the National Museum of History and Technology, along with significant objects from the museum's collections, to a conference on "The Roots of California Culture" at the Oakland Museum April 17-19. The conference, and a related exhibition, is jointly sponsored by the Smithsonian, the University of California Extension, and the Oakland Museum.

This marks the first such effort to bring the Smithsonian's resources directly to a part of the country too distant for most of its residents to be able to visit the Institution, according to Malcolm Watkins, who will head the museum delegation.

California is sometimes referred to as a "nation within a nation." The influences that helped to create this distinct culture will be the focus of the conference.

Smithsonian personnel attending and their lecture topics follow:

C. Malcolm Watkins, Chairman of the Department of Cultural History and Curator of Northeastern Pre-Industrial Cultural History, "The Lingering Colonial Environment in California's Historic Roots."

John H. White Jr., Chairman of the Department of Industries and Curator of Land Transportation, "The Locomotive's Westward Migration."

Richard E. Ahlborn, Curator of Spanish Colonial Cultural History, "The Mexican Cultural Sources of Spanish California."

Miss Rodris Roth, Curator of Victorian Furnishings, "American Furnishings in the Period of the Gold Rush."

J. Jefferson Miller II, Associate Curator, Division of Ceramics and Glass, "Ceramics as Cultural Indicators Prior to the Gold Rush."

Carroll Greene Jr., Curator of the Frederick Douglass Institute of Negro Arts and History and Adviser to the Smithsonian Institution on Afro-American art and history, "The Afro-American Experience and Its Relevance to Early California."



John N. Edy Jr.

John N. Edy Dies; Business Aide

John N. Edy Jr., a management specialist with the Smithsonian for the past 10 years, died in late March at Suburban Hospital after an illness of several months. He lived at 5101 River Road, Chevy Chase, Md.

Edy, 62, a native of St. Louis, Mo., served as an industrial and public administration specialist with various commercial and Government organizations in Texas, California, and most recently in the Washington area.

Edy leaves his wife, the former Dorothy Dee Will; two sons, John N. Edy III, of Santa Monica, Calif., and Lee Will Edy of Charlotte, N.C.; and six grandchildren.

Smithsonian at Expo Historic Plane Goes on Trip

Sirius, the plane that Col. and Mrs. Charles Lindbergh flew on their famous 1931 "Great Circle" hop to Japan, left the National Air and Space Museum's Silver Hill Restoration Facility Feb. 19 bound for exhibit at Osaka's Expo 70.

This time the historic aircraft made the flight to Japan packed in the hold of a U.S. Air Force C-124 Globemaster cargo plane based at Andrews Air Force Base.

Sirius' history-making 1931 flight was conceived by Col. Lindbergh to gather first-hand information on possible trans-Pacific airline routes.

The directions he charted from Long Island, New York, via Maine, Hudson Bay, Point Barrow and Nome, Alaska, and the coastal islands of Siberia, are still flown by Pan American Airways and Northwest Airlines.

Lindbergh was accompanied on the trail-blazing flight by his wife, Anne, who served as radio operator. She later recounted the adventures on the two-month trip in her book, *North to the Orient*.

Sirius made another contribution to air history in 1933 when Col. and Mrs. Lindbergh took it on a 30,000-mile Atlantic

survey flight embracing 21 countries and four continents. When they returned from the journey, the plane was presented to the American Museum of Natural History in New York, where it was on view until the mid-1950's. It went then to the Air Force Museum at Wright-Patterson AFB in Ohio.

In 1960 the craft was presented to the National Air and Space Museum.

At Osaka the craft will be exhibited in a glass case near the U.S. Pavilion, the centerpiece of a display entitled "Wings Across the Pacific." It will return to Silver Hill next October.

On display with the *Sirius* in the glass case will be the experimental liquid propellant rocket that Robert H. Goddard presented to the Smithsonian in 1935 in recognition of the Institution's support of his researches. Goddard did not want the device displayed in his lifetime and the box containing the rocket was bricked inside a false wall in the basement of the Smithsonian until after World War II when it was exhumed and placed on display.

NCFA Art Works To Be Reproduced, Circulated Widely

By Benjamin Ruhe

Major art works from the Smithsonian Institution's National Collection of Fine Arts will be reproduced for worldwide distribution by a new electronic and photographic process called chromography.

Forty-eight of the most interesting oil paintings, drawings, and watercolors from the NCFA's collection of 15,000 works of art will be reproduced over the next five years. The NCFA will be the third American art museum to have objects from its collection chromographed. Collections from the Whitney Museum of Art in New York and the Art Institute of Chicago were done earlier.

S. Dillon Ripley, Secretary of the Smithsonian, praised the agreement with Hament Chromographics, Inc., of New York. "The great resources of the National Collection of Fine Arts," he said, "can now become available to educational institutions and to private citizens everywhere. At a time when museums are being asked to reach out beyond their walls with their collections, reproductions of such high caliber will play a very important part in helping to achieve this aim."

The American heritage from the Colonial era to the modern scene will be covered by the project. Among the masterpieces to be reproduced are Winslow Homer's "High Cliff, Coast of Maine," Albert Pinkham Ryder's "Moonlight," Childe Hassam's "Sunny Blue Sea," Thomas Moran's "Cliffs of the Upper Colorado River, Wyoming Territory," John Mix Stanley's "Buffalo Hunt on the Southwestern Prairies," Alvin Fisher's "Niagara Falls," James McNeill Whistler's "Valparaiso Harbor," and Frank B. Mayer's "Independence." Other selections include George Catlin's "Buffalo Bull's Back Fat," Marsden Hartley's "Young Worshipper of the Truth," Milton Avery's "Spring Orchard," and Stuart Davis' "Int'l Surface No. 1."

Other artists to be represented include Jacob Lawrence, Henry Varnum Poor, Frederic Remington, Morris Kantor, Thomas Dewing, and Cleve Gray. A portfolio of 24 works will be reproduced this year, to be followed by 24 more in succeeding years.

The chromographs will be available for purchase in Smithsonian museum shops, as well as in selected stores across the country. They will also be available for educational and corporate use. It is expected that they will be placed in United States Information Service libraries around the world. International exchanges of the series for reproductions of foreign art treasures is another goal.

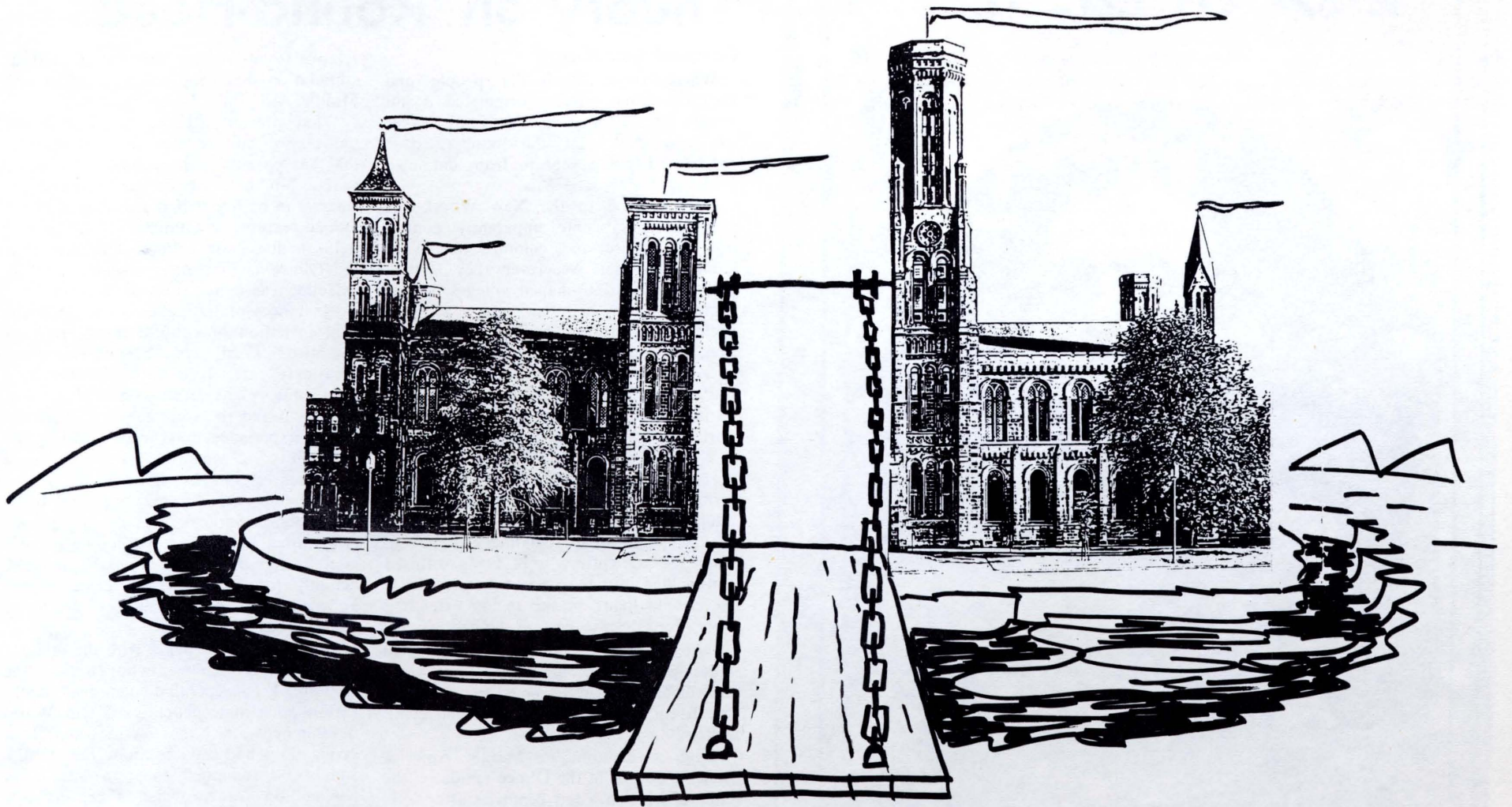
Each chromograph will be mounted on canvas or other appropriate material to recreate the surface of the original work, and then it will be framed. Each painting will be accompanied by booklets giving a description of the work, its place in American art, a biography of the artist, and a history of the National Collection of Fine Arts.

In the event that a work of art by a living artist is selected for duplication, he will be paid a royalty. Widows of artists whose work is chosen will also be paid a royalty.

The selection of paintings was made by the staff of the National Collection of Fine Arts, headed by Dr. Joshua Taylor, the Director.

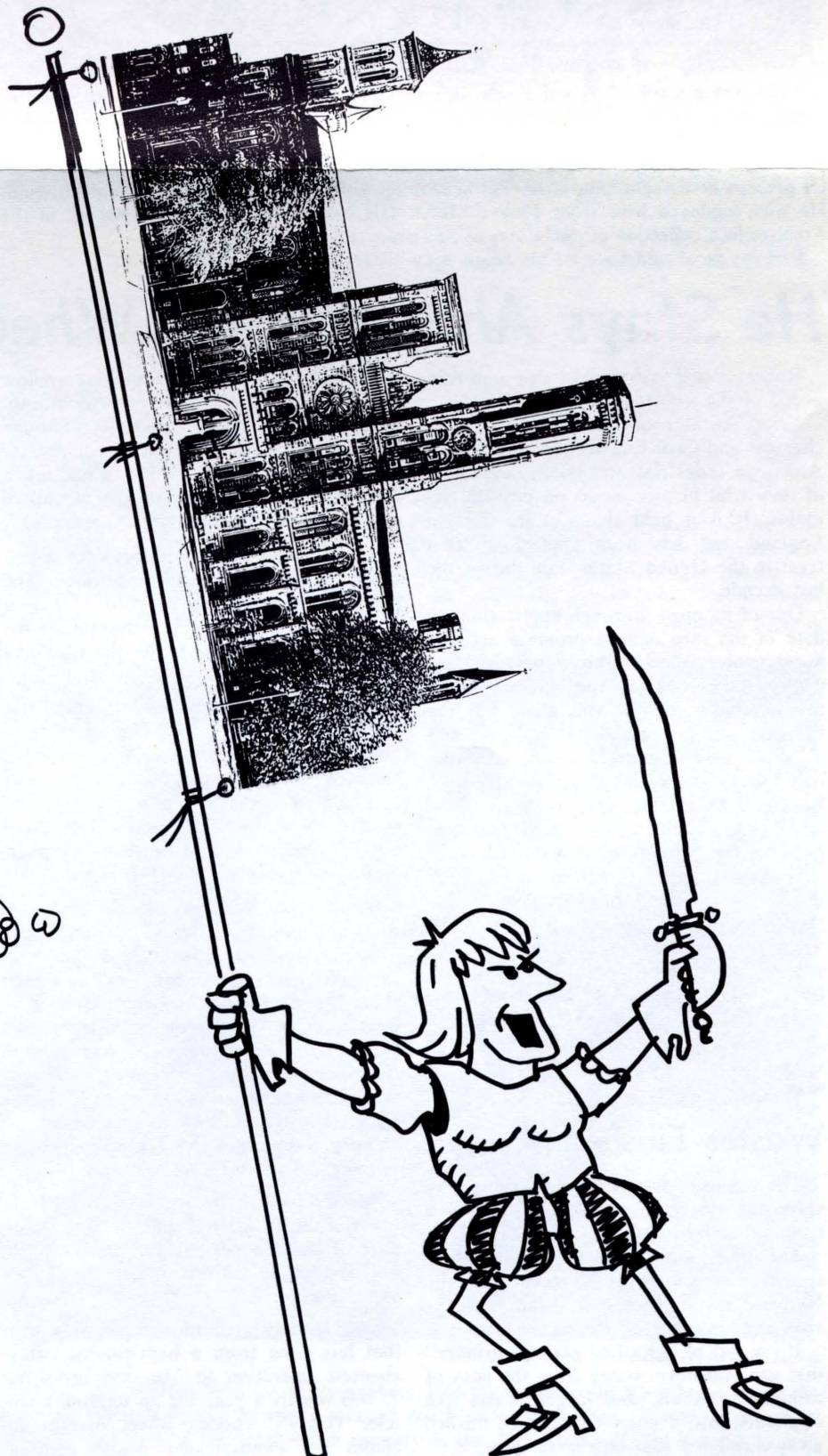
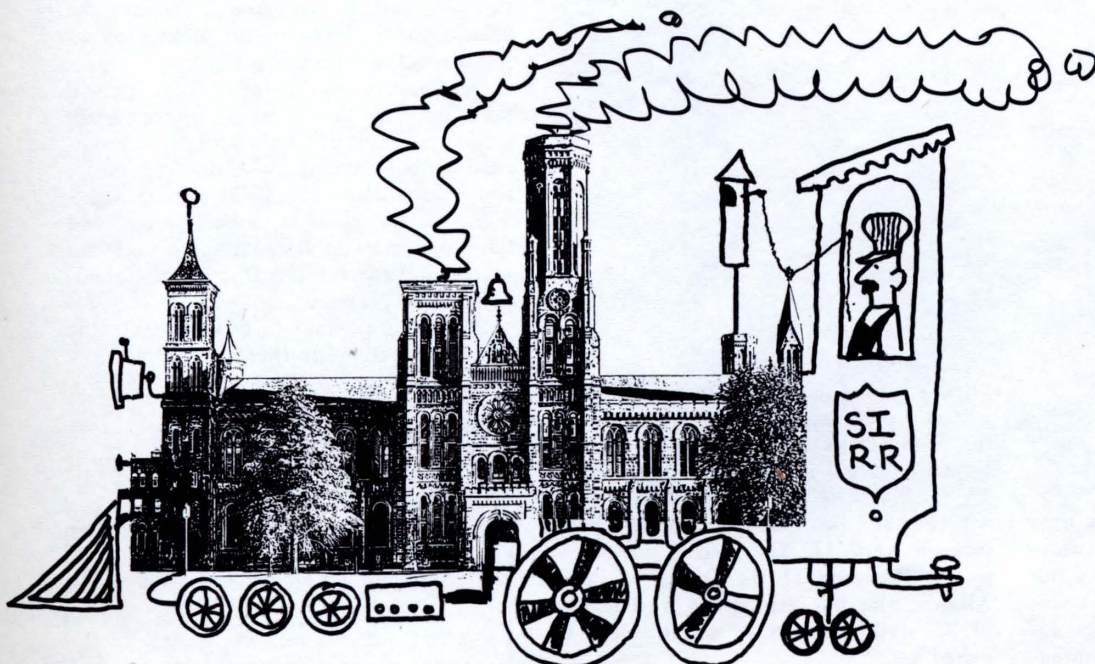
Magazine Debuts

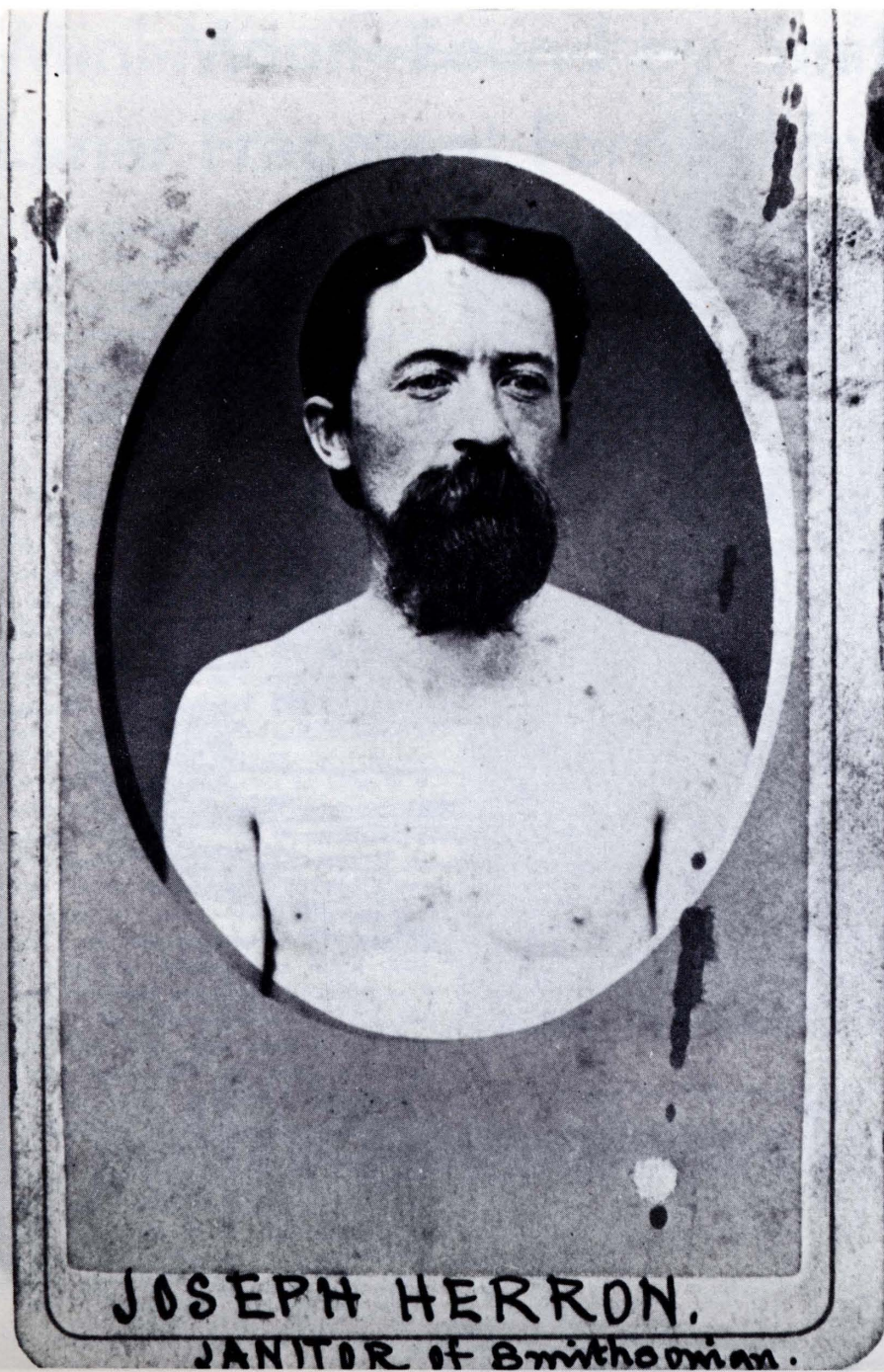
Smithsonian, the new magazine published by the Associates, is off to an auspicious start in its first issue: a guaranteed circulation of 175,000—actually the April run exceeded 200,000. It is sold by subscription only, for \$10 a year, as part of membership in the Associates throughout the nation. The first issue covered a variety of topics ranging from an elephant mating study in Ceylon and a black studies program to the centennial of the Metropolitan Museum and knot tying in A&I.



Towering Imagination Transforms Castle

If the Smithsonian Institution can be many things to many people, its famous castle building can be just as many things to the imaginative mind of Jim Corneli, SAO information officer. Such as . . .





"The Naked Janitor" is not a new skin flick. It is Joseph Herron, who worked unclothed by clothing in the SI Building for some 20 years—"but not on the day shift," reports Maury Callahan, of the Smithsonian Archives. The facts on Mr. Herron are bare. He evidently met the challenge of a low salary by not accumulating a large wardrobe. Or perhaps he thought naturalism was in keeping with a job in the U.S. National Museum. He was employed here from 1866 to 1883. His bare-chested picture turned up in the Archives in a collection of miniatures of SI employees.

Perhaps he should have let his beard grow longer.

He Stays Ahead of the Wheels of Progress

Robert Vogel is trying to stay one turn ahead of the wheels of progress.

Vogel, curator of the Division of Mechanical and Civil Engineering, is active in American industrial archeology, the study of industrial history based on physical remains. It is a field that got its start in England and has been applied by that term in the United States only during the last decade.

One of its most thorough applications to date in the race against progress actually does involve wheels. The wood-wheel industry, once one of the nation's most thriving businesses, is still alive, but the life expectancy is questionable. Vogel and his staff have conducted a year-long detailed study of the oldest survivor, Hoopes, Bro., and Darlington, Inc., of West Chester, Pa., to document, from a living example, how the industry was conducted.

Hoopes started turning out wheels back in 1867, and by the turn of the century was producing about 600,000 a year. The wheels were made from scratch, from logs supplied by Hoopes' own lumber camp. Logs, though not Hoopes logs, still arrive at the old red-brick factory complex, still go through the same processes on the same machines, and still come out as wheels.

Wastes Flushed Away

The "Super Scooper" may some day solve the lingering problem of pollution from cattle feed-lots.

The pilot model for a waste-disposal system was demonstrated recently at the National Zoo by Biospherics, Inc., a Rockville company that developed the unit.

It's a sort of "glorified garbage grinder" that can transform waste from the pens of ruminant animals, and larger beasts like elephants, into a slurry that can be flushed away through a four-inch sewer pipe.

"It's just like looking through a window into the 19th century," says Peter Smith, a George Washington University graduate student in American studies doing research in Vogel's office. "If you had taken a picture in 1880 and today, you would see essentially the same things happening."

That is what makes Hoopes such a valuable object of study for historians. The industry was such a large one that it reached a highly mechanized state by the 1890's and virtually froze there, Vogel points out.

Working in cooperation with the Eleutherian Mills-Hagley Foundation of Wilmington, Del., Vogel and his staff have recorded Hoopes' operations so precisely that 200 years from now, if someone wanted to restore the wood-wheelmaking business, he would find most of the information he needs in the MHT records.

Vogel and company made measured drawings of the Hoopes buildings, and detailed measured drawings of some of the machines. The factory was originally steam powered but was later converted to electric drive. They took extensive photographs, conducted interviews with administrative and other personnel, collected documents and artifacts, surveyed the wheel industry as it exists throughout the country today, and even recorded factory sounds.

Motion picture footage, shot by Al Robinson of the Office of Public Affairs, is also part of the Hoopes archive. It will probably be made into a movie for public viewing as well.

The Hoopes' record will show a firm that has gone from a high-volume, wide-clientele operation to one that turns out 12,000 wheels a year for an unusual clientele. Today's wooden wheel market includes the Pennsylvania Amish commu-

Theory on 'Round-Heads'

Continued from Page 1

Where these Machalilla people and their distinctive pottery originated is not known at the present, but Ford makes the suggestion that this represented a second colonizing venture from unknown points on the coast of Asia.

Once arrived in the New World, the round-headed people apparently continued to explore and colonize northward along the coast. Wherever they settled, they established C-shaped villages similar to those found in Japan, left remains of pottery with distinctive shape and decoration, and built burial mounds.

By the year 2000 B.C., pottery-making round-heads had crossed the Isthmus of Panama and established settlements as far northward as the St. John River in Florida.

The 3000 years that follow the arrival of the round-heads in the New World is described by Ford as a formative period, "during which the elements of ceramics, ground stone tools, handmade figurines, and . . . agriculture were being diffused and welded into the socioeconomic life of the people living in the region extending from Peru to the eastern United States.

"At the start of this span of years, all these people had an Archaic economy and technology; at its end they possessed the essential elements for achieving civilization."

High civilization in Middle America first blossomed in the Olmec region on the Gulf of Mexico a few centuries after 1500 B.C. with the sudden introduction of a religio-political system demanding great public works. A remarkable ceremonial complex infinitely advanced over anything else in the Americas at that date soon developed.

Olmec civilization is generally credited with being the principal ancestor for both Maya and Aztec civilization and at the same time, Ford says, undoubtedly influenced the later development of Inca civilization in Peru.

In North America the Olmec civilization diffused up the Mississippi Valley into Ohio where by 3000 B.C. the Hopewell culture with its extensive geometric burial earthworks developed for a few centuries before being overrun and destroyed by other Indians.

"That civilization did not develop in the Mississippi Valley is probably due to its

relative isolation from the mutual cultural stimulation that took place in South and Middle America," Ford says.

What precipitated the development of the Olmec culture has been a question that has puzzled anthropologists for many years. No hint of earlier development stages can be found that would lead to the unique features of Olmec.

Ford does not believe, however, that the Olmec civilization's development was as sudden as it has seemed.

"Instances of spontaneous and independent invention of cultural items, such as ceramics," Ford says, "are becoming increasingly rare. It now seems that they exist only where archeologists have not yet discovered the steps that led up to the event. Experience thus argues against the probability of spontaneous development of Olmec ceremonialism."

Ford suggests that what appeared to be the unique characteristics of the Olmec civilization, such as construction of precisely engineered ceremonial mounds, actually had evolved from customs and knowledge brought to the New World by round-heads.

He concludes his paper with the remark:

"Those gentlemen, who prefer the traditional concept that American civilization arose independently of Old World developments, or that Aztec and Inca civilizations had little common foundation, should be reminded that an alternative explanation was provided a century ago by Adolf Bastian, who believed that 'the psychic unity of mankind constantly impelled societies to duplicate one another's ideas.'"

A Comparison of Formative Cultures in the Americas, published by the Smithsonian Institution Press, is available from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402 Price \$7.75.

Bicentennial

Continued from Page 1

soldier filled his days constructing shelters, making and mending clothing and equipment, blacksmithing, repairing arms, casting musket balls, cooking, baking, caring for the sick, and performing guard duty.

A highlight of the park is a Parade, where the visitor can see Revolutionary troops being drilled and marching in review to the accompaniment of an authentic Colonial band. The Parade also will provide a setting for presenting other activities of the era, including folk dancing and singing and pageants, and for band performances in the Sousa tradition.

The park will offer a visitor-orientation center, with continuous movie showings, and a reconstruction of a frontier fort of the French and Indian War era. Taking advantage of the waterfront site, NAFMAB plans a comprehensive display of the naval side of the Revolution, including weapons in accurate reconstructions of shipboard settings and samples of the simple furnishings that the "iron man" crews had to live with.

Pointing up the contributions of the armed forces to civilian life, the famous bathyscaphe *Trieste I*, pioneer in exploration of the ocean floor, will be installed adjacent to the boat landing. The installation will include background on how the vehicle operated and results of its exploration as well as the vessel itself.

Development of the Jones Point site will take into consideration its more urban character. Plans call for a waterfront promenade, boat landing, historic ship basin, and recreational areas. The 1855 lighthouse on the point is to be restored, and the stone marker designating the original southern corner of the District of Columbia will be preserved.

If recovery plans are successful, the prime attraction at the Jones Point site will be the Civil War monitor U.S.S. *Tecumseh*, now lying at the bottom of Mobile Bay. NAFMAB will attempt to raise and restore the vessel and display it in a specially designed dry berth.

Editor of the Torch this issue
was Benjamin Ruhe.



"Red Woman," a drawing by Susan Steele, is part of the second art exhibition by and for Smithsonian employees in the Studio Gallery, located in the foyer of the MHT TV Studio. The show of some 70 works will be on view during business hours through April 17. The gallery was set up by Al Robinson of the Office of Public Affairs, who has established a committee of SI staff members to select works for exhibition.