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THE SMITHSONIAN

TORCH



The Data - Sphere

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Contributions are encouraged from all employees of the Smithsonian Institution. If you have an item for THE TORCH please give it to the secretary of your department or send it directly to Mrs. Fields in the Personnel Division.

CONTRIBUTIONS SHOULD BE RECEIVED BY THE LAST DAY OF THE MONTH.

RECEIVES NAS AWARD

Dr. Herbert Friedmann, head curator of the department of zoology, received the Daniel Giraud Elliot medal of the National Academy of Sciences on April 27. The presentation was made during the Academy's 96th Annual Meeting, which was held in Washington April 27-29.

The award was in recognition of Dr. Friedmann's studies of the honey-guides, issued as a Bulletin of the U.S. National Museum in 1955. These studies clarified several puzzling problems about these birds.

Prior to this work it was thought that the birds fed chiefly on the honey and bee larvae in wild bees' nests, but, being unable to open such nests by themselves, the birds led or guided humans to the hives (hence the name honey-guide). After the men had taken their fill, the honey-guides fed on the remnants left strewn about.

Since the only use to the bird of the guiding habit depended on the cooperation of a totally independent creature, man, the habit could have had value to the birds only if it were perfected by both participants. It was found that the African natives deliberately substituted themselves for the original "partner" of the bird, the ratel or honey-badger.

The guiding behavior, which looks so purposive, is merely an excitement reaction of the bird when it meets with a potential

foraging associate, and which calms down when it sees or hears bees. Since this usually happens near a bees' nest, the effect is that the follower is usually led to a hive. Many observations show that the behavior is purely instinctive, and involves no "planning" or pre-knowledge by the bird.

It was found that the birds' interest in the hives was in the wax of the comb, not in the honey or bee larvae. Studies showed that the birds depend on wax-splitting microbes in their digestive tracts to make the wax digestible.

The birds are parasitic in their breeding; that is, they lay their eggs in nests of other birds, to whose attention they are left.

The young honey-guide, on hatching, has the single egg-tooth of normal birds doubled, one on the upper and one on the lower bill, and these are elongated into curved, sharp hooks, with which the young bird attacks and kills its nest-mates, thereby insuring more food for itself. This feature of two egg-teeth is one of the most remarkable adaptive structures known in birds.

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SPECIAL EXHIBITS

The National Collection of Fine Arts is sponsoring two special exhibits that opened on May 3. They are the 62d Annual National Exhibition of the Washington Water Color Club and the 26th Annual Exhibition of the Miniature Painters, Sculptors, and Gravers Society of Washington, D. C.

Both exhibits are to continue through May 21 in the Natural History Building.

EDUCATIONAL TV

In its constant search for more effective means for the diffusion of knowledge, the Smithsonian Institution has this past winter been pioneering in the relatively new field of educational television.

"Time for Science," a program sponsored by the Greater Washington Educational Television Association, supplements classroom learning with visual equipment far beyond the limited means of a teacher. The Smithsonian Institution has lent to "Time for Science" many slides, pictures, and objects, including a Babylonian cuneiform tablet and a model of Fulton's steamboat, the Clermont.

A recent letter from GWETA thanking the Smithsonian for making available these many objects reads, in part: "More than 43,000 fifth and sixth graders in 17...Washington, Maryland, and Virginia school districts have thus been able to see simultaneously the invention or application of a discovery as it is being discussed. The impact and authenticity... lent to many "Time for Science" lessons could not have been achieved in any other way."

GWETA, of which the Smithsonian is a member, recently received grants from the Eugene Meyer Foundation and the National Science Foundation to assist in the continuation of its program.

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I have yet to find the man, however great or exalted his station, who did not do better work and put forth greater effort under a spirit of approval than he would ever do under a spirit of criticism.

--Charles Schwab

PUBLISHED IN APRIL

Smithsonian Miscellaneous Collections--"The Journals of Daniel Noble Johnson (1822-1863) United States Navy," edited by Mendel L. Peterson; 268 pages.

Proceedings of the U.S. National Museum--"A Revision of the Milliped Genus Brachoria (Polydesmida: Xystodesmidae)," by William T. Keeton; 58 pages.

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RECEIVES AWARD

Mrs. Vera Gabbert, of the department of anthropology, recently received a certificate and cash award for meritorious service.

When making the presentation Secretary Carmichael announced the award was an official recognition of Mrs. Gabbert's splendid participation in coordinating the Junior League Docent Service. He said that "in addition to performing your ever-increasing duties as secretary to the head curator, department of anthropology, with courtesy and dispatch, you willingly accepted the responsibility of keeping the docent program flowing smoothly."

The presentation ceremony was held in the Regents Room on April 30 before a large gathering of friends.

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NEW ASSOCIATE CURATOR

Dr. Nicholas Hotton III has been appointed associate curator of fossil reptiles and amphibians. He will assume his duties in June.

Dr. Hotton has been assistant professor of anatomy at Kansas University for the past eight years.

LECTURES AT UNIVERSITIES

Dr. Herbert Friedmann, head curator of the department of zoology, gave four lectures last month.

On April 10 in Minneapolis he lectured before the zoology staff and graduate students of the University of Minnesota on the subject of "Wax Digestion in Honey-Guides." The next evening he gave a popular lecture on "The Guiding Habit of the Honey-Guide" at the Minnesota Museum of Natural History.

In Cambridge, Mass., on April 20, Dr. Friedmann addressed the Nuttall Ornithological Club on "Recent Studies of Honey-Guides"; and on the 21st he lectured before an audience of Harvard's zoology staff and graduate students on "Studies of the Parasitic Weaver-Birds."

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MR. SMITH GOES TO WASHINGTON

Following are excerpts of an Associated Press story by B. I. Livingstone that was noted in the Long Island Press, Jamaica, N. Y. The quotes are from a report on a trip to Washington by John Smith of Waterbury, Conn., who is 8 years old.

"First we went to the Smithoion Insttood, that was very interesting. Then we got to go to the Pan American Union, that was very interesting too. I'm not sure that I know the next one but I think it's the National Gallary of Art."

"Then we went to the U. S. capital (and that was boaring). Then we went to the hotal."

"What a boaring day!"

"... And I went in the White House but I couldn't see white, all I could see was feet."

"And what I forgot to mention was that I saw in the Smith-

onion and that was Linburgs plane the first plane to cross the Atlantic Ocean. And there is one other thing I did not mension was about the doom of the Unknone Soldger and the Changing of the Gards, (that was interesting)."

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RECEIVES CITATION

James C. Bradley, Assistant to the Secretary, was cited by Secretary of the Interior Fred A. Seaton on April 27 in recognition of his outstanding service to the Department of the Interior in the fields of engineering and administrative management.

Mr. Bradley was appointed Assistant to Secretary Carmichael on January 12 after serving nearly nine years as a principal technical and administrative assistant in the Office of the Secretary of the Interior.

The citation by Secretary Seaton reads, in part, as follows: "In grateful appreciation of his splendid service and record of achievement, the Department of the Interior bestows upon Mr. Bradley its Distinguished Service Award."

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LECTURES AT HIGH SCHOOL

Malcolm Davis, associate head keeper at the National Zoological Park, recently gave illustrated talks before two biology classes at Herndon High School in Fairfax County, Va.

His subject was the biology of birds, with emphasis on Antarctic penguins.

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Immature people think they're different.

BAE SCIENTISTS CONTRIBUTE ARTICLES IN 2-VOLUME WORK

Two scientists in the Bureau of American Ethnology are authors of chapters in the recently published work titled "Readings in Anthropology," compiled by Morton H. Fried of Columbia University.

In volume 1 (subtitled "Readings in Physical Anthropology, Linguistics, and Archeology"), Dr. Frank H. H. Roberts, Jr., Director of the Bureau, discusses "Earliest Men in America," and Dr. William C. Sturtevant, ethnologist with BAE, describes "The Fields of Anthropology."

Dr. Sturtevant is also the author of a chapter on "Anthropology as a Career," which appears in the appendix of volume 2 ("Readings in Cultural Anthropology").

Other authors in the second volume include Dr. Julian H. Steward and the late Dr. Frances Densmore. Dr. Steward, a former staff member of BAE and scientific editor of its noted "Handbook of South American Indians," has contributed chapters on "The Concept and Method of Cultural Ecology" and "Levels of Socio-Cultural Integration." Dr. Densmore, who was a Smithsonian research associate, wrote the chapter on "Music of the American Indian."

"Readings in Anthropology" brings together for student use a rich assortment of articles of substantial length that range over the whole field of anthropology, from pioneer classics to the most recent works. Many of the selections heretofore were unavailable to many students.

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TALKED ABOUT

The following was noted in the March 15 issue of Vogue Magazine:
"People Are Talking About . . . The sudden emergence of Washington's enormous Smithsonian Institution, now directed by Dr. Leonard Carmichael, as the 'new culture hotspot.'"

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"Why, yes, as a matter of fact there is: I would like to run down and join Blue Cross."

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FIRST-AID GRADUATES

Thirteen employees at the National Zoological Park recently completed Red Cross first-aid courses.

Those completing the standard course were Johnny Chandler, Randolph Clay, and Admiral Gatties.

Recent graduates of the advanced course are Samuel Beeler, Donald Brown, Edward Croughan, A. M. Dunnington, Wilbur Hale, R. A. Jacobs, Paul F. Mason, Howard J. Moore, L. H. Porter, and Raymond Shipp.

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EXPLORE "WICKEDEST CITY"

Undersea divers soon will be exploring the submerged ruins of Port Royal, Jamaica, reputed to be the "wickedest city in the world" when an earthquake toppled it into the sea in 1692.

The Smithsonian Institution and the National Geographic Society are sponsoring the expedition with the cooperation of the Jamaican government.

Edwin A. Link, deep-sea explorer and inventor of the Link Trainer, will lead the expedition. Headquarters will be aboard Mr. Link's new 91-foot oceanographic research ship, Sea Diver II, recently launched in Quincy, Mass. It is the first ship designed and built especially for underwater exploration.

The Sea Diver, with a crew of underwater experts and archeologists, will begin work at the site of Port Royal, near Kingston, about June 1. Preliminary investigations show that extensive ruins of the old city lie under 35 feet of water.

Mendel L. Peterson, curator of naval history, will take part in the expedition. He believes that the discovery and precise dating of important 17th-century relics will be of great interest to archeologists, historians, and antiquarians. Marion Link will be another member of the expedition. She will prepare the official chronicle of the project.

Port Royal, once the home of buccaneer Henry Morgan and his men, was a principal port of call for New England sailors who brought goods from the mainland to trade with the West Indies.

What remains of Port Royal above water today is a small village on the outskirts of Kingston. Near-

by is Fort Charles, which the British naval hero Horatio Nelson commanded before he was 21 years old.

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RAINCOAT STORY

In a letter to Secretary Carmichael dated April 28, Congressman Joseph W. Barr of Indiana wrote as follows:

"Monday afternoon about 5:30 I was driving down Independence Avenue in an English roadster with the top down. In addition to being down, the top also happens to be very balky and is extremely difficult to raise.

"Riding with me was a good friend and constituent from my home city of Indianapolis. Unfortunately, just at this time it started to rain, and I am sure you know there is no chance to get out of that Independence Avenue traffic to put up a top. I was fortunate enough to have on a raincoat but my friend was hatless and coatless and was just starting to get soaked.

"At this very embarrassing juncture, Mr. Rudolph G. Morris of the Section of Photography, A & I Building, pulled alongside and threw out a raincoat with the cheerful advice to send it back to the Smithsonian in the morning.

"This was an act of gentlemanly courtesy that literally left me dumbfounded. In this age of high speed progress, such an act of kindness made a very deep impression on me. If this gentleman is an example of the type of employees you have at the Smithsonian Institution, I should like to state for the record that you are very fortunate indeed."

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Success is good management in action.

DATA-SPHERE PRESENTED

The U.S. Air Force recently presented the "Data-Sphere" to the Smithsonian Institution. The Data-Sphere is the first instrumented capsule launched by an Air Force long-range ballistic missile to be recovered intact from outer space after returning to earth at free-falling speed.

Developed for the Air Force by the General Electric Co., the capsule was launched on June 13, 1958, from Cape Canaveral, Fla. It rose over 200 miles, re-entered the atmosphere at a speed of more than 10,000 miles an hour, was ejected from the nose cone of the rocket, and, continuing at a free-falling speed unchecked by a parachute or other retarding device, struck the water of the South Atlantic with an impact 40,000 times greater than the force of gravity.

This is the first of a series of such capsules recovered. Equipped with a tiny tape recorder, a battery power-pack, a radio homing-beacon, dye marker, and a "bomb" that sends out a sound to indicate location for recovery purposes, these capsules have gathered vital information about outer space. Data recorded include temperatures, pressures, stresses during take-off and climb, conditions at the greatest altitude attained, heat encountered during re-entry into the atmosphere, and the tremendous forces of final impact as the capsule slammed into the water. This information has not only greatly broadened man's knowledge of the upper air and the space beyond, but also is directly applicable to the program for ultimately sending man himself into outer space.

The Data-Sphere resembles an enormous orange, 18 inches in diameter. The upper half is colored yellow to make it more visible, and

the bottom half is a greenish black, owing to a liberal application of a fish-repellent chemical. This undercoating became necessary after an earlier test ball, which had been dropped into the ocean by an airplane, was found with a huge bite taken out of it, apparently by some inquisitive and hungry shark.

After recovery of the Data-Sphere, its thick gelatinous casing, formed of a special plastic, was slit open so that the tape could be removed from the recorder for play-back in the laboratory. During in-flight operation, many electronic "sensors" had measured the phenomena encountered, but these measurements were ingeniously commutated on only two channels for recording.

The Data-Sphere, as presented, has all its original instruments installed, still surrounded by the foamlike mass which kept them from shifting inside the plastic capsule, despite tremendous stresses. In the Smithsonian exhibit, duplicate examples of these instruments are shown, together with a scale model of the Thor rocket that carried the capsule, a scale model of the nose cone in which the capsule was protected during most of the flight, and a plastic shell of the same type as that which gave final protection at impact. The original shell sank after splitting open, as planned, when the sphere struck the water.

The presentation ceremony was at 10 a.m. on May 15 in the rotunda of the A & I Building. Gen. Bernard A. Schriever, Commander of the Air Research and Development Command, made the presentation, with Secretary Carmichael accepting for the National Air Museum. Attending were Philip S. Hopkins, Director of the Air Museum, other members of the Museum staff, prominent officials of the Air Force and the General Electric Co., and representatives of other organizations that developed elements for this historic sphere.