

## BONGO SPECIMENS RECEIVED FROM CAPTAIN WHITE

From Africa there arrived at Field Museum last month five specimens of the bongo, one of the rarest and handsomest of all antelopes. The animals were sent by Captain Harold A. White of New York and Major John Coats of London, who are leading an expedition, financed by them jointly, in behalf of the Museum.

The bongos will be used in the near future in the preparation of a new habitat group. For years specimens of these animals have been desired at the Museum, but none of the institution's previous expeditions to Africa have been fortunate enough even to come within sight of the elusive creatures. Included among those sent by Captain White is a huge bull which is close to the record size ever obtained by any hunter.

The bongo is a giant beast of reddish brown color with numerous vertical white stripes on its body. Full-grown bongos weigh from 400 to 600 pounds. The group of them was the most important objective of the expedition, although there have also been obtained specimens of Colobus monkeys, rhinoceros, eland, and various other animals. Hunting the bongo is an extremely difficult task, according to Dr. Wilfred H. Osgood, Curator of Zoology. One must often crawl on hands and knees for long distances through extremely deep dense wet forest areas on the higher mountains while tracking it. The chief habitation of the animal centers around Mount Kenya and neighboring peaks.

Captain White has notified the Museum that he and his associates not only obtained the specimens, but were also successful in making the first motion and still photographs ever taken of living bongos.

## PATINA ON ANCIENT BRONZE

By H. W. NICHOLS  
Associate Curator of Geology

The more ancient among the antique bronzes and coppers which are being restored by an electrolytic process in Field Museum, now possess, upon completion of the treatment, a good natural patina. The patina of a bronze is the thin coating which the bronze acquires in the course of time through a slight oxidation of its surface from exposure to the atmosphere. The patina, when well formed on a bronze of good composition, has an attractive color, texture, and luster, and it is highly prized.

The antique metal treated at Field Museum has, when first received, a heavy crust composed of a mixture of soil with the products of corrosion of the bronze. When this is removed by electrolysis the bright surface of the metal is exposed. Any original patina, if not already destroyed by corrosion of the buried bronze, will be removed with the crust. In several years' study of the problem methods have been developed, based on minor modifications of details of the electric treatment, by which the metal surface is left in such a sensitive state that it will acquire naturally in a few hours a patina that it takes years for a normal bronze surface to take on.

This method of patinating bronze is still in the development stage. At present it is uniformly successful only with the most ancient bronzes. It is expected that further study will so develop the process that it will be effective on bronzes of more recent origin.

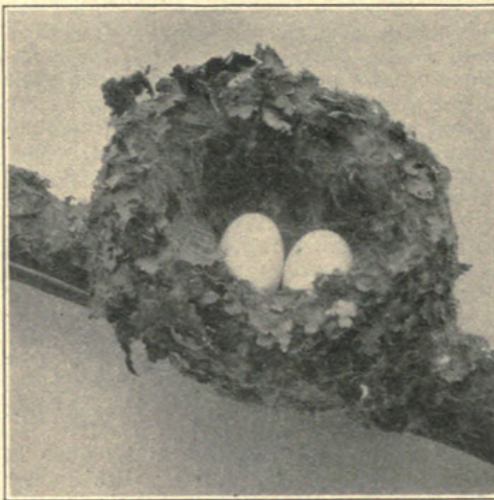
Replacing lost patina on bronze has long been a problem in museums. Methods of obtaining the patina which depend on burying the bronze for a long time in decaying

organic matter, such as spent tan bark, are uncertain and often destructive. Methods depending upon the use of corrosive gases and liquids form patinas that are not as pleasing in color as might be desired. Accurate imitations of patina can be secured by the use of colored lacquers and waxes, but as these are imitations they are not much favored in the large museums.

## THE NESTING OF THE HUMMINGBIRD

By COLIN C. SANBORN  
Assistant Curator of Mammals

The smallest feathered architect of the Chicago area is the ruby-throated hummingbird. It is the female of this tiny bird which not only broods, feeds the young, and starts them on their way in the world, but builds the nest before their coming. The male seems to expend all his energy in a very acrobatic



Hummingbird's Nest

Photograph is approximately natural size. The specimen is  $1\frac{1}{4}$  inches long,  $1\frac{1}{2}$  inches wide,  $1\frac{1}{4}$  inches deep on the outside, and  $\frac{3}{4}$  inch deep inside. This is a fair average size.

courtship, flying back and forth before the female in a great U-shaped arc, and displaying his bright-colored throat for her benefit.

The nest is placed in a crotch or astride a small limb, from four to twenty feet from the ground. It is made of downy fibers from ferns and milkweeds, and silky filaments from willows and poplars, which are bound together by spider or tent-caterpillar webs. As it is built, the outside is covered with lichens and bits of bark so that, when completed, it appears to be a knot or growth on the tree. The female shapes the nest with her body while arranging the material with her bill and feet. The nest measures about one and a half inches in diameter and about the same in depth. With fair weather, it usually takes about a week to build.

The two elliptical, white eggs, about the size of a navy bean, are laid a day or so apart and hatch in from eleven to fourteen days. The young remain in the nest from fourteen to twenty-eight days.

The young are fed by regurgitation, on nectar from flowers and on small insects which are caught on the wing.

The ruby-throat breeds in this region in late May and early June, and sometimes raises a second brood in August. It arrives early in May and leaves in September.

Of the eighteen hummingbirds found in North America, the ruby-throat is the only one occurring in the east. It breeds from Labrador to Florida and west to North Dakota, Nebraska, and Kansas.

## JUNE GUIDE-LECTURE TOURS

Following is the schedule of conducted tours of the exhibits during June:

Week beginning June 1—Monday: 11 A.M., Indians of the Northwest, 3 P.M., Trees of the Chicago Area; Tuesday: 11 A.M. and 3 P.M., General Tours; Wednesday: 11 A.M., Chinese Art, 3 P.M., Musical Instruments; Thursday: 11 A.M. and 3 P.M., General Tours; Friday: 11 A.M., Eskimo Exhibits, 3 P.M., The Cat Family.

Week beginning June 8—Monday: 11 A.M., Rare Animals, 3 P.M., Physical Geology; Tuesday: 11 A.M. and 3 P.M., General Tours; Wednesday: 11 A.M., Habitat Groups, 3 P.M., Looms and Weaving; Thursday: 11 A.M. and 3 P.M., General Tours; Friday: 11 A.M., Marine Life, 3 P.M., The Story of Man.

Week beginning June 15—Monday: 11 A.M., Workers in Metals, 3 P.M., Oils and Fibers of Economic Value; Tuesday: 11 A.M. and 3 P.M., General Tours; Wednesday: 11 A.M., Prehistoric Life, 3 P.M., Roman Culture; Thursday: 11 A.M. and 3 P.M., General Tours; Friday: 11 A.M., South America, 3 P.M., Systematic Birds.

Week beginning June 22—Monday: 11 A.M., North American Mammals, 3 P.M., Indians of the Southwest; Tuesday: 11 A.M. and 3 P.M., General Tours; Wednesday: 11 A.M., Peoples of the South Seas, 3 P.M., Gems and Jewelry; Thursday: 11 A.M. and 3 P.M., General Tours; Friday: 11 A.M., Egypt, 3 P.M., African Animals.

Week beginning June 29—Monday: 11 A.M., Mexico, 3 P.M., Reptiles, Past and Present; Tuesday: 11 A.M. and 3 P.M., General Tours.

Persons wishing to participate should apply at North Entrance. Tours are free and no gratuities are to be proffered. A new schedule will appear each month in FIELD MUSEUM NEWS. Guide-lecturers' services for special tours by parties of ten or more are available free of charge by arrangement with the Director a week in advance.

## NEW MEMBERS

The following persons were elected to membership in Field Museum during the period from April 17 to May 16:

### Life Members

Walter S. Carr, Scott S. Durand

### Associate Members

Dr. Samuel W. Chavis, Duncan L. Clinch, Howell W. Kitchell, Miss Frances Railton, Dr. William M. Scholl, Mrs. Frederick W. Spiegel, Miss Josephine Stockton.

### Sustaining Members

Mrs. Maude Staley

### Annual Members

Miss Lily A. Berlzheimer, Mrs. Rollin T. Chamberlin, Mrs. D. F. Cleary, J. H. Clemer, C. Groverman Ellis, Mrs. R. V. Fletcher, Miss Maude Gordon, Mrs. M. A. Griffith, Fred C. Holmes, John Hayes Kelly, Charles F. Keyser, Sr., Raymond H. Koch, George Kort, Howard L. Krum, L. L. Lazelle, A. L. Lettermann, George Russell McVay, Edward F. Moore, Treadway B. Munroe, Miss Ida Peirce, Mrs. J. P. Pfeiffer, Daniel C. Plummer, Jr., John W. Shaver, Mrs. Paul Amandus Thomas, Ernest H. Thompson, Mrs. E. H. Waterman, Roswell B. Whidden, Rudolph L. Wild, Mrs. James D. Woolf, Mrs. Joseph W. Young, Mrs. H. Zitzewitz.

## MEMBERSHIP IN FIELD MUSEUM

Field Museum has several classes of Members. Benefactors give or devise \$100,000 or more. Contributors give or devise \$1,000 to \$100,000. Life Members give \$500. Non-Resident (Life) and Associate Members pay \$100. Non-Resident Associate Members pay \$50. All the above classes are exempt from dues. Sustaining Members contribute \$25 annually. After six years they become Associate Members. Annual Members contribute \$10 annually. Other memberships are Corporate, Honorary, Patron, and Corresponding, additions under these classifications being made by special action of the Board of Trustees.

Each Member, in all classes, is entitled to free admission to the Museum for himself, his family and house guests, and to two reserved seats for Museum lectures provided for Members. Subscription to FIELD MUSEUM NEWS is included with all memberships. The courtesies of every museum of note in the United States and Canada are extended to all Members of Field Museum. A Member may give his personal card to non-residents of Chicago, upon presentation of which they will be admitted to the Museum without charge. Further information about memberships will be sent on request.





Nichols, Henry W. 1931. "Patina on Ancient Bronze." *Field Museum news* 2(6), 4-4.

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