THE NEW FRENCH BATTLESHIP "DEMOCRATIE."

BY LIEUTENANT-COLONEL C. FIELD, GLASGOW.

The fine French battleship "Democratie," which was put upon the stocks at Brest in the course of last year, was very recently launched in the presence of a large and enthusiastic crowd of spectators. The displacement of the new war vessel is 14,800 tons, and the weight of her armor alone when complete is estimated to reach 4,000 tons. She is 439 feet in length with a beam of just over 79 feet, and will draw nearly 28 feet of water.

She will carry an armament composed of four 12-inch guns, placed in turrets at bow and stern; ten 7.6-inch quick-fire guns, of which six are in turrets and the remaining four in casemates, two on the main deck forward and two on the lower deck aft; and twenty-eight lighter pieces of ordnance. The ten 7.6-inch guns are a change from the original design, which provided the "Democratie" with sixteen 6.4-inch weapons, of which twelve were carried by pairs in the turrets, which are now to contain a single 7.4-inch gun apiece. Besides her artillery the new ship will be provided with five torpedo tubes, two of which will be placed below the waterline, the remaining three being protected by the armored side.

The armor carried by the "Democratie" will be strong and extensive. She will have a complete armor belt at the waterline extending from stem to stern. It will have a maximum thickness of 11 inches amidships, but will taper off toward bow and stern. A lighter cuirass will surmount this, protecting her sides from all but the heaviest kinds of projectiles. On the top of the waterline belt will be an armored deck 2.4 inches in thickness, while the armor is reinforced lower down by a second deck 2 inches thick on the flat and 2.8 inches at the ends. The two main turrets will be covered with armor from 11 to 12½ inches in thickness, while the smaller turrets and casemates will have the protection of plating about half that thickness. The "Democratie" will have three screws actuated by three engines having a combined horse-power of 17,500. She will have, it is estimated, a full speed of 18 knots an hour and will carry 1,800 tons of coal in her bunkers. Her crew will consist of 793 officers and men, and it is hoped that she will be ready for commissioning in a couple of years' time.

Probably few botanists would know how to distinguish the apple and pear when not in fruit, except, perhaps, in a general way by the habit of growth, the branches of the pear tree being usually more erect and outline more pyramidal. The horticulturist, however, has noticed that the young leaf of the apple unrolls on one side, but that of the pear on both sides at the same time.—Gard. Chron.

THE GOVERNMENT PHILIPPINE EXPOSITION.

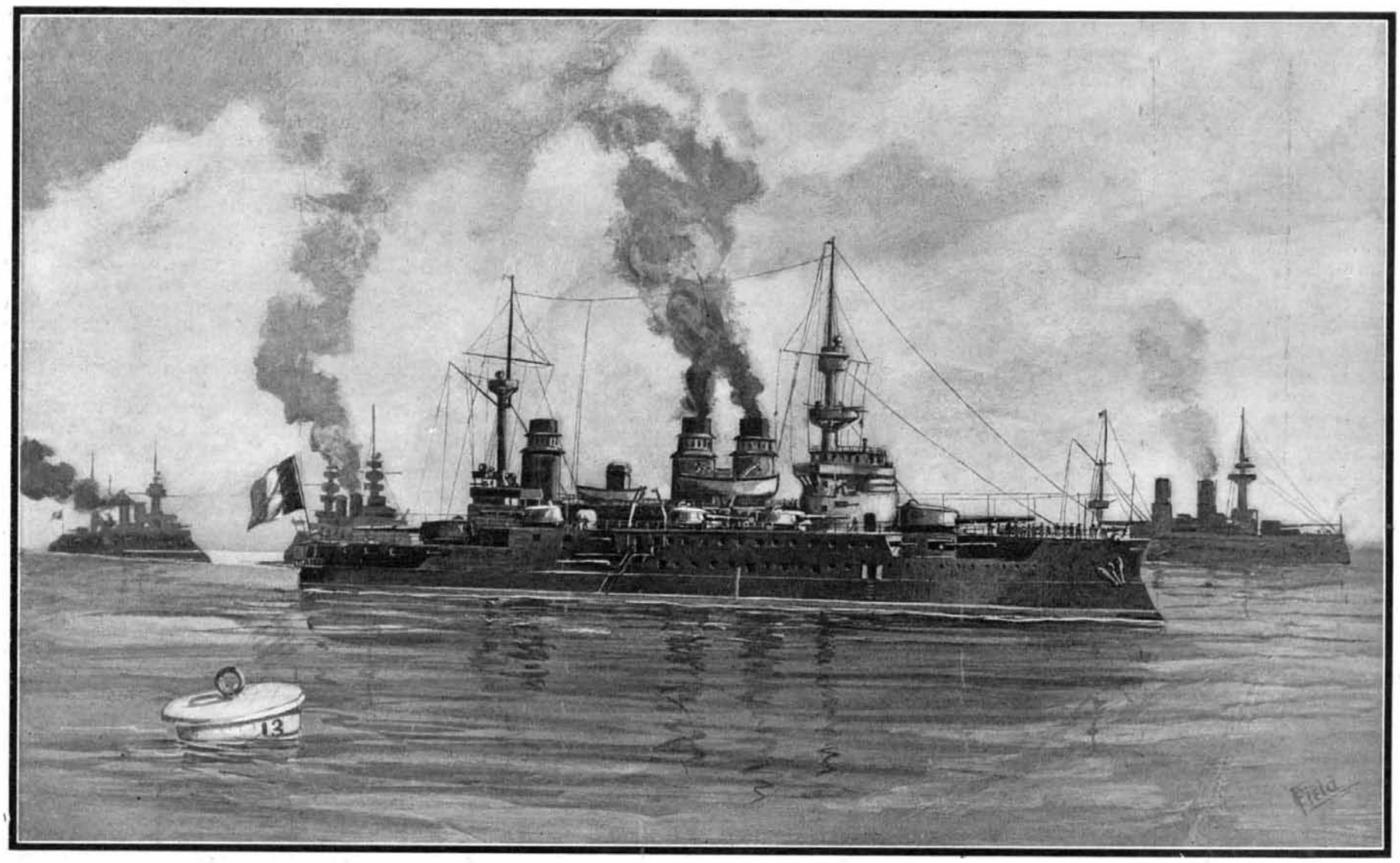
BY THE ST. LOUIS CORRESPONDENT OF THE SCIENTIFIC AMERICAN.

If one were called upon to name the one exhibit at St. Louis which, in its completeness and intrinsic value and interest, takes precedence over any other, his choice must surely fall upon the Philippine Exhibit, which was gathered together, constructed, and is now being run, under the auspices of the United States government. The name of its sponsors is of course a sufficient guarantee that this work has been done with conscientious thoroughness, and too much cannot be said in praise of the completeness and highly instructive character of this display. The object of this costly exhibit is to familiarize the people of the United States with the Philippine possessions. To quote the words of its officials: "One thing that has stood in the way of the proper development of any colonial possession by its governing country, has been the fact that a lack of knowledge of the real conditions and affairs of their colonies has blocked the way of the legislation most necessary for such development and exploitation." The credit for the work is due largely to the initiative of Secretary Taft, who induced the Philippine Commission to make an appropriation of over $1,000,000, for the purpose of securing and making an exhibit of Philippine products, manufactures, art, ethnology, and education, to say nothing of the customs and habits of the Philippine people, at the Louisiana Purchase Exposition. The work was carried out by a special board with Dr. W. P. Wilson, director of the Philadelphia Commercial Museum, at its head.

This unique exhibit, which occupies 47 acres of rolling woodland, contains nearly 100 buildings, which range in size and variety of construction from the hut of the aboriginal native to the palatial Spanish Administration Building. It contains in its various structures 75,000 catalogued exhibits, and no less than 1,300 representatives of the various Filipino tribes.

Entrance to the ground is made across a lagoon by means of the Bridge of Spain, which leads through a massive gateway into the walled city. This work is a reproduction of the actual structures at Manila, and it has been done with such perfection of architectural detail and such faithful coloring, that it carries all the atmosphere of the ancient structures of the city itself. In fact, the walls are an exact reproduction of those which encircle the city of Manila proper, and within them are found a collection of war relics, furnished by the United States army and the Philippine scouts and the constabulary. The lake crossed by the Bridge of Spain is a facsimile of the Laguna de Bay, and along its shores are built the Moro, the Bagobo, and the Visayan villages, while on its waters float several large *cascos* (or scows) and various marine craft used by the islanders. Now, it must be borne in mind that these villagers, the boats on the water, the utensils, and in fact everything pertaining to this exhibit, is of Philippine origin, the very material of which the villages are constructed having been brought over, together with the Philippine natives themselves, from our new possessions. The visitor can stroll through village after village, and see these naked savages wearing nothing but the loin cloth, following the round of their daily life, cooking, sleeping, and engaging in their pastimes and sports, exactly as they do in their native islands. They are a bright, sunny race, glad to talk with the *Americano*, and ever ready to respond, with a smile that shows their pearly-white teeth, to any questions which they are able to answer.

Down in the shady canyons of the Exposition grounds, and along the shores of the lake, one may study the Filipino as he was when the United States took charge of the islands. On the central plateau of the grounds above, may be seen the Filipino as the United States government has improved him; for here, strutting around in their natty khaki uniforms, and looking every inch the United States soldier, are to be seen several companies of the native scouts, a body of soldiers which owe their origin to that ever-to-be-lamented army officer, Gen. Lawton. The original body of scouts did good service under Gen. Lawton, and later under Gen. Young; and they proved so serviceable, and gave evidence of such good soldierly qualities, that in 1901 an act of Congress authorized the enlistment of 12,000 natives as scouts. They have always proved loyal, have all been under fire, and after the civil government took charge, the scouts formed part of the many garrisons throughout the island.



Displacement, 14,800 tons; **Length,** 439 feet; **Beam,** 79 feet; **Draught,** 28 feet; **Armament:** four 12-inch, ten 7.6 inch, two submerged and two above-water torpedo tubes.

THE NEW FRENCH BATTLESHIP "DEMOCRATIE."

Here and there one meets representatives of the Constabulary Battalion, which is composed of 11 officers and 280 enlisted men. All the Christian tribes of the islands are represented in this battalion, and, like the scouts, they have done good service. The scouts have an excellent band, which gives daily performances on the main plaza of the Exposition.

Of the native tribes to be seen in the Exposition, the most primitive are the Negritos—little fellows of a distinctly negro type, who are remarkably skillful with the lance and the bow and arrow. Nothing makes them so happy as to show their skill, by knocking a five-cent piece out of the twig of a tree at a distance of fifteen paces.

Then there is the village of the Head-Hunting Igorotes, a race that is greatly superior to the Negrito, and a fine type of agricultural barbarians. They are copper colored, and the men have a splendid physical development, the women being also well formed and of graceful carriage.

In another village are the fierce Moros, one hundred of these fiery followers of Mohammed being present at the Exposition. The Samal Moros, of whom there are forty from the island of Mindanao, are the sea rovers

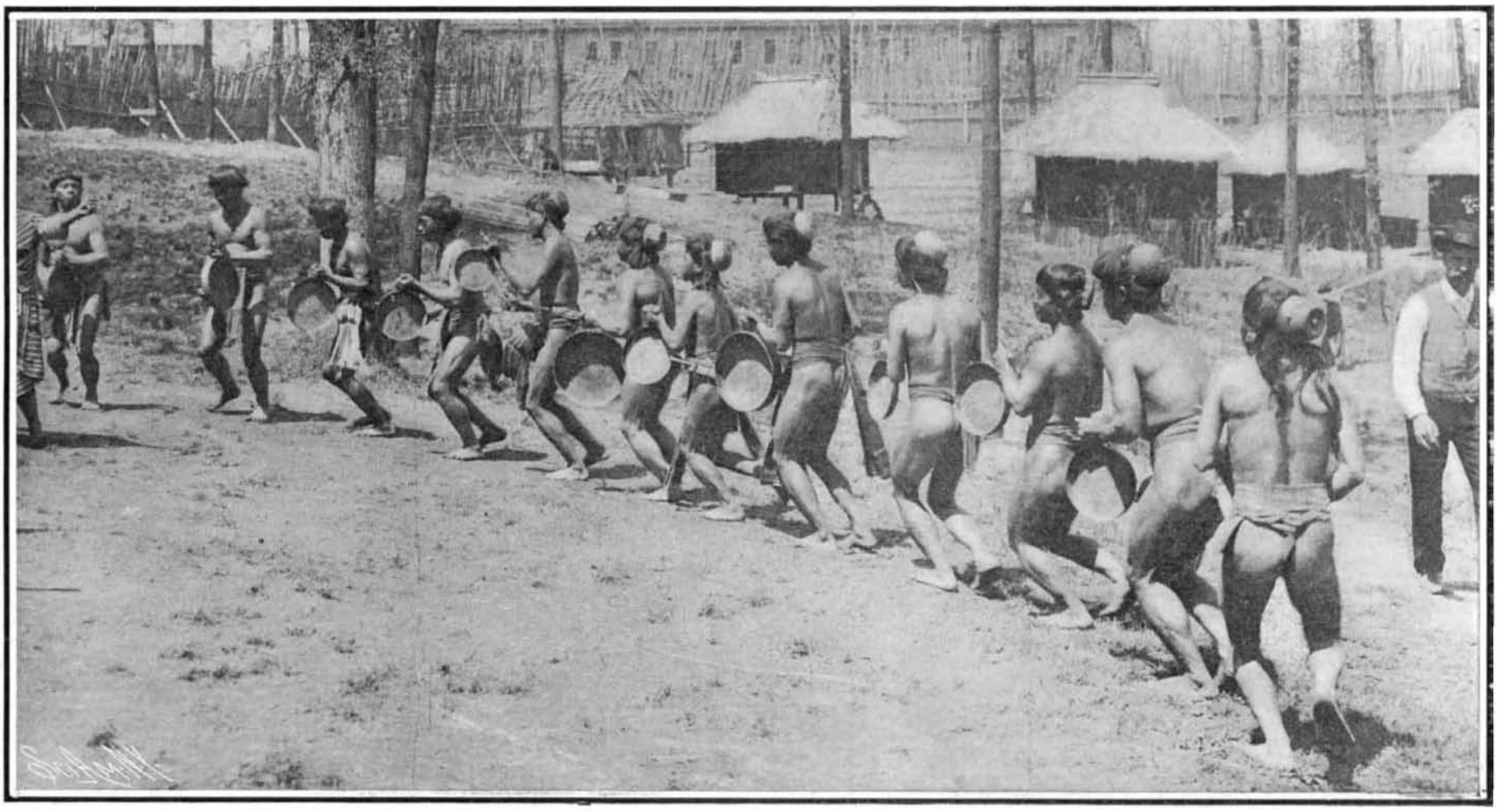
Antonio, Chief of the Igorote Head Hunters.

Model Village of Samal Moros (Pirates and Pearl Fishers).

Two Moro Dattos (Sub-Chiefs).

Model Tree House in Which Five Moros are Living.

Philippine Constabulary.



Photographs copyrighted 1904 by Louisiana Purchase Exposition Co.

Igorotes' Dance at the Fair.

THE GOVERNMENT PHILIPPINE EXHIBIT AT THE ST. LOUIS EXPOSITION.

or pirates. This tribe is about the most intelligent of all the tribes inhabiting the islands. Here also we find the spectacular Bagobo tribe, notable for their beautifully-ornamented costumes, who come from the highlands of the interior of Mindanao. Finally, we have the Christianized Visayans, with their village built over the waters of the lagoon. The people of these native tribes are all to be seen engaged in their native pursuits and manufactures.

The central plateau of the exhibit grounds is occupied by several buildings, many of which are reproductions of actual structures in the Philippines. There is the Agricultural Building, containing the work of the Bureau of Agriculture of the Philippine Islands during the past three years; and a most encouraging display it is, including exhibits of several hundred varieties of rice; of cotton and process of manufacture; of various grasses of hemp and other fibers; of tobacco, etc. Then surrounding the central plaza will be seen the Ayuntamiento, the Cathedral, the Commerce Building, and a typical Manila house, all of which are fine examples of the better class of Manila structures. The most striking of these is the Cathedral, which is a miniature reproduction of the cathedral at Manila. In this building are installed the exhibits of education, and part of the art exhibit.

Three years after the first landing of the American troops, the transport "Thomas" reached Manila Bay with a shipload of American teachers on board. After three years of work, the result may be summed up by stating that "*the English learned by the Filipino people in the past three years is greater in amount than the Spanish they acquired in the four hundred years of Spanish rule.*" The education exhibit shows the work of the elementary schools and the high schools, thirty-six of which latter have recently been established. One of the most charming features of this section is a Philippine school, shown in active operation in its schoolhouse of bamboo and Nipa palm—an exact duplicate of a country school building in the islands.

The Commerce Building on the south side of the plaza contains samples of the imports of the islands and the articles of native manufacture, while in the Manila Building is installed a collection of the textile fabrics of native manufacture, including exquisite laces, and embroideries so fair and delicate that one wonders how they have stood the transportation.

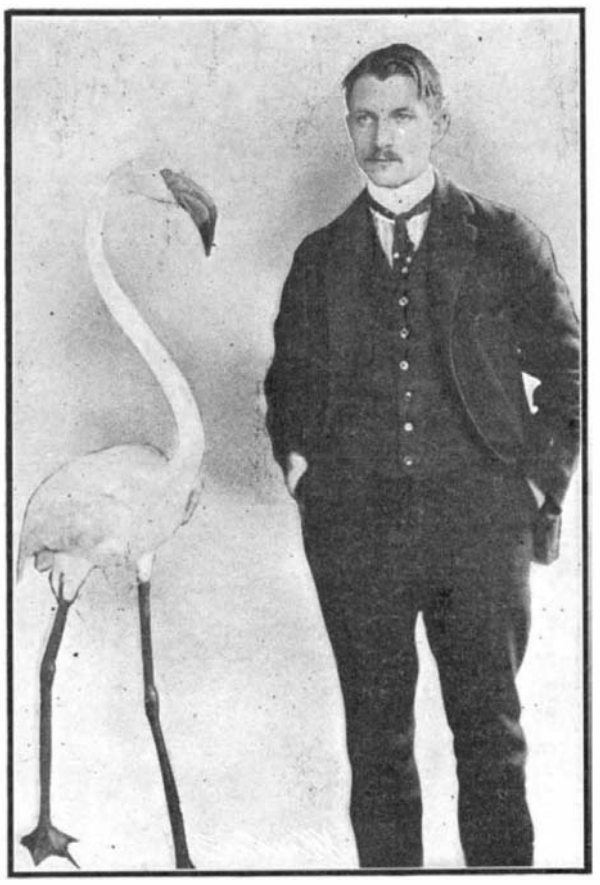
The Forestry Building is a large structure of hardwood framing and flooring, with Nipa sides and roofs. In its construction one hundred different kinds of woods indigenous to the islands were used; and it should be understood that the forests of the Philippines, which are of vast extent, form one of the most valuable assets of the government, containing, as they do, all the tropical hardwoods, such as ebony, mahogany, rosewood, etc. Limitations of space forbid any lengthy mention of the Ethnology Exhibit, and the Fisheries Exhibit on the shore of the lake, which includes one thousand mounted specimens of the different fish of the islands, and a collection of the native fishing gear, including bamboo fish traps and corrals, and the various styles of fishing boats.

The mineral wealth of the Philippine Islands, which is known to be very great, is as yet only in the preliminary stages of development. There are extensive beds of lignite and indications of petroleum. Gold exists in almost all of the islands, iron is abundant, and for many years the Igorote has made his own jewelry from the gold deposits of the Benguet Hills. A comprehensive display is made of the different native metals and minerals. Concluding our notice of this most creditable exhibit, it is not stretching the point too far to say that, if the average American citizen came to this great Exposition and did nothing more than spend his time within the government Philippine inclosure, the time and expense of his visit would be amply justified; for he can learn, during two or three days spent on these grounds, more about our new possessions than he could pick up in many months' travel throughout the islands themselves. Speaking for himself, the writer can say, that at the close of a most delightful day spent in these grounds, he left them with a distinct feeling of pride in the far-sighted wisdom of a government that could conceive and put into such splendid execution a project such as this. Moreover, the last doubt was removed from his mind that, in this matter of colonization, the latest and most difficult national enterprise upon which this nation has embarked, the government would achieve one of the most successful and beneficent works in the history of the United States.

THE FLAMINGO AND ITS QUEER NEST.

BY WALTER L. BEASLEY.

After considerable difficulty, Prof. Frank M. Chapman, of the Department of Ornithology of the American Museum of Natural History, has secured the first flamingo nests ever brought to this country.



THE BAHAMA FLAMINGO.

There are about seven species of flamingoes, three of which are in America, frequenting the Bahamas, Florida, and Cuba. In height the flamingo averages about five feet. If its curved neck were stretched to its full length the bird would tower above the head of an ordinary man. During May and June, the breeding time, the birds' bright-colored plumage is faded, but reassumes its most radiant hues in winter. When first hatched the young have a straight bill, which, after a time, develops into one of bent shape. The first plumage is grayish-white and passes through various tints of pink, rose, carmine, or vermilion to the full scarlet of the adult, which reaches its deepest shade on the wings. Several years are necessary to perfect the final gaudy plumage.

COLONY OF FLAMINGO NESTS, BAHAMA ISLANDS.

The eggs are white, showing a blue tint when scraped under the surface. They are long, oval, and have a thick shell, equaling in size that of the common goose. The flesh is not palatable to the taste, being extremely oily. The birds feed upon both animal and vegetable matter from the ooze and soft bottoms of the shallow waters and lagoons selected by them both as a feeding ground and nesting place. When flying their long legs are stretched out behind, and the neck is extended. They have a peculiar voice and a sort of one-syllable outcry, which they utter as an alarm signal the moment they are approached or believe themselves to be in danger. On account of their keen-eyed and wary nature it is almost impossible to get within close range of them.

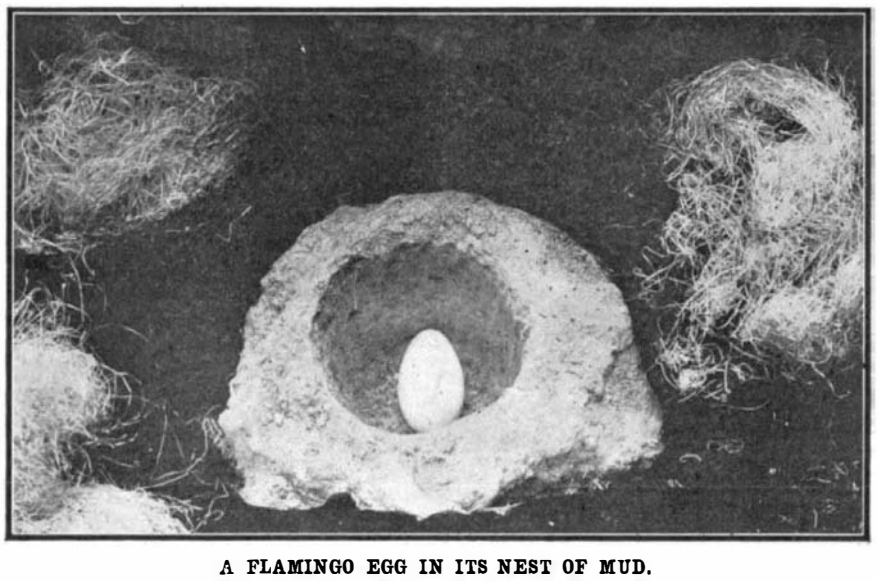
Prof. Chapman gives the following account of his work in the Bahamas:

During the winter the birds live chiefly on the west coast of the island, where the shallow water and soft marl bottom afford them an abundance of food and prevent pursuit either by boat or on foot; but in May they gather in some lagoon in the interior of Andros Island, far from the habitations of man, to rear their young. These breeding resorts are few in number and their whereabouts are comparatively unknown. We succeeded in reaching a large flamingo rookery well in the heart of Andros without undue difficulty. Our schooner was left at anchor behind the shelter of some outlying reefs, and the final part of the voyage was made in small boats.

The locality is only a few inches above the sea level, and is characterized by wide stretches of shallow lagoons bordered by red mangrove trees, with occasional bare bars of gray marl, and by outcrops of coralline rock so eroded and waterworn into bladelike edges and sharp, jagged pinnacles, that walking is attended by much danger. Our tents were pitched on a sand bar, and preparations made to visit the flamingo colonies known to exist in the vicinity.

Subsequent research showed that the locality was regularly frequented by these birds as a breeding resort, but that apparently a different spot was chosen each year. Eight groups or villages of nests were found within a radius of a mile, each evidently having been occupied only one year. The largest of these, placed on a mud bar only an inch or two above the level of the surrounding water, was a hundred yards in length, and averaged about thirty yards in width. An estimate, based on an actual count of a portion of this colony, gave a total of two thousand nests for an area of, approximately, only 27,000 square feet. This rookery we judged to have been occupied the previous year. At a distance of a mile we found nests scattered about in a dense growth of mangroves. Here the birds were found at work upon their nests for the present year.

A flock was seen which was estimated to contain about seven hundred birds—a sight of surpassing beauty. Although no shot was fired and a retreat was promptly made, the birds were disturbed by our intrusion, and either discontinued operations or removed to some other locality, and eventually we were forced to leave without seeing fresh nests. Those in process of building, however, told somewhat the manner of their construction. Those built among the mangroves were in an excellent state of preservation, a few even containing eggs. The task of getting these nests into the hold of the schooner was one of great difficulty. The largest secured measured 18 inches in diameter at the bottom, 13 inches at the top, and 9 in height, and weighed upward of 100 pounds.



A FLAMINGO EGG IN ITS NEST OF MUD.

Being one solid mass of mud and dried only externally, it needed only a slight jar to break the strongest of the nests into fragments, and the prospect of transporting the specimens to New York in safety seemed one of uncertainty. The Bahama negro boatmen were not accustomed to delicate work of this character, and it required special inducements in the way of pay to tempt them to wade barefooted through the lagoons and to travel over the keen-edged rocks with burdens of from 50 to 150 pounds on their heads.

The nests were placed in the canoe and reached the schooner with the breaking of only three out of nine specimens. In Nassau they were treated with a solution of gum arabic, which hardened them, and after being wrapped in plaster of Paris bandages they were packed separately in large boxes and reached New York in excellent condition. Specimens of the flam-