

variety of uses. All fishing lines and nets of the best quality were invariably made of *olona*, because of its high resistance to the action of salt water. *Olona* lines and nets which have been in more or less constant use for over a century are almost as good as new, and are handed down from generation to generation as precious objects. Most of the natives are very unwilling to part with any of their fishing gear that is made of *olona*. The very serviceable carrying-nets, *koko*, in which the wooden calabashes and other objects were borne, were commonly made of *olona* fiber. *Olona* was not used for making the bark-cloth or *kapa* itself, but threads and cords of *olona* were used for sewing the *kapa*. A stout cord of *olona* was usually attached to the wooden war-clubs and dagger-like swords, for suspending the weapon from the wrist. This prevented the loss of the weapon during the fray. For fastening the stone adz, *oo*, to its wooden handle, *olona* was always the preferred fiber.

It was used for the very fine and pliable netting which served as a groundwork for the feathers, in the construction of the splendid garments and insignia of the ancient royalty and *alii*. The brilliant scarlet and yellow feathers were skillfully woven by the women upon the imperishable framework of *olona*.

Mr. William Weinrich, manager of the Hawaiian Sisal Company's extensive plantation, has made an exhaustive study of fibers in the Hawaiian Islands, and has kindly prepared for the writer the following statement concerning *olona*:

This fiber not only partakes of all the best characteristics of this genus, but is superior to any of its members, producing the best of all fibers known at the present time. The three dominant features are

First—the great tensile strength. I estimate that the strength of *olona* is about three times the strength of commercial Manila. The statement is made that *olona* is about eight times as strong as the hemp, *Cannabis sativa*. So far as I can gather, this great strength is due to the unusual length of the cell in proportion to its width.

Second—its great resistance to deterioration in salt water. I once examined a ball of *olona* fish-line, the Hawaiian owner of which stated that it

had been in their family, and in constant use, for over fifty years. At the time I saw it, the fiber was in an excellent state of preservation.

Third—its pliability, and thus its adaptability for spinning by hand. Fishing lines and nets made from this fiber by expert Hawaiians present an appearance of so uniform a caliber and twist that it would lead one to believe that the fiber had been made by the most intricate machinery.

It was the writer's pleasure, some years ago, to send samples of the *olona* fiber to the manufacturers in the East. To my surprise, the fiber was found to be absolutely unknown in that market.

A fiber with these characteristics should be exploited to the fullest measure. The extraction of this fiber is not a difficult process. In the history of Hawaii we find references to this fiber as having been grown on a large scale as a source of revenue; but, like many other things Hawaiian, its usefulness has been lost sight of during the progress of civilization.

The key to the situation lies in transforming this plant from its wild state to a cultural form. When this is done, the world will be in possession of a new fiber, having a greater tensile strength, weight for weight, than any other fiber known.

VAUGHAN MACCAUGHEY

COLLEGE OF HAWAII,  
HONOLULU

#### THE BARBADOS-ANTIGUA EXPEDITION FROM THE STATE UNIVERSITY OF IOWA

THE Barbados-Antigua Expedition from the State University of Iowa returned to New York on August 1, with all its members in good health and without mishap of any kind.

There were nineteen persons in the party, nearly all of them instructors or graduate students from the State University of Iowa. Their object was not only to secure collections in marine zoology, entomology and geology from a region in which little work had hitherto been done; but also to study the living forms in and around the islands visited and thus supplement the future more intensive work based on the collections secured.

In both Barbados and Antigua the colonial authorities provided excellent quarters for the party and adequate laboratory facilities in government buildings, and both officials and

private citizens aided the enterprise in every possible way.

At Barbados dredging was accomplished at about one hundred stations, working down to over 150 fathoms. This was rendered possible by the use of a fully equipped 27-foot launch provided by Mr. John B. Henderson, of Washington, who accompanied the expedition and who will report on the collections of Mollusca of which many new or rare forms were taken.

Practically all species taken with the dredge or tangles will provide new locality records extending the known geographical range. The fauna, while not so rich as that of the western end of the Antillean chain, or the continental shelf off the Florida Keys, is of remarkable interest from a distributional standpoint, while a number of new forms will interest the systematist. The apparent scarcity of certain groups abundant in the western parts of the West Indies, such as the Asteroidea, was something of a surprise. As is usually the case in a region of growing corals the coelenterate fauna was most conspicuous, but there seemed to be a remarkable scarcity of medusæ. Indeed the pelagic fauna was rather poor.

Shallow water forms, on the contrary, were remarkably abundant and interesting, furnishing ample material for laboratory work and study of forms *in situ*. Some probably new forms of actinians and corals were secured. *Balanoglossus* was found in the sand near our laboratory on Pelecan Island.

By employing a native diver many species were secured at depths from three to nine fathoms. Some remarkably fine corals and alcyonarians were thus obtained. The use of fish-pots and native fishermen resulted in a fairly complete set of reef fishes which would not otherwise have been secured. Very few deep-water fishes were taken.

Many gorgeously colored comatulics were dredged, but the pentacrinoids were represented by but a single *Rhizocrinus*. The serpent stars were, as usual, very abundant and a number of simple-armed basket-fish were found. Crustacea were, of course, particularly numerous, perhaps the most interesting being small macrourans secured by breaking up old coral heads.

At Antigua the party was given quarters at the old dock-yard at English Harbor, a formidable naval base in Nelson's time. Here the conditions were entirely different from those at Barbados. The trade-winds were so strong and constant during our stay that little dredging could be accomplished, and the entire time was devoted to shallow-water forms in English Harbor, Falmouth Harbor and Willoughby Bay. These waters were over mud bottoms; the shores, however, being varied in the form of mud flats, mangrove swamps, sand beaches and rocky shores. Here were found a veritable wealth and variety of aquatic forms, a great majority being different from those secured at Barbados.

Tube-dwelling worms, some of great size and beauty, were perhaps the most striking feature; tunicates and holothurians coming next in point of abundance both in individuals and species. Among the Mollusca, a great quantity of beautiful *Murices* were collected off the sea wall, where they seemed to be devouring the soft parts of a bivalve (*Perna*) that was attached in great quantities near high-water mark. A very large Chaetopod, called locally "sea scorpion," was found to bore through a heavy *Livona* shell, making a hole as smooth as a drill.

Large and wonderfully beautiful anemones of several species were abundant, particularly in Falmouth Harbor, as well as the finest colonies of *Pennaria* that I have ever seen. The Echinoidea were well represented, mostly by well-known forms.

One small spatangoid was found to live buried from six to twelve inches under the sand. Among the Crustacea, a very large land-crab, with orange brown carapace and purple and white chelæ, was perhaps the most striking form.

At both Barbados and Antigua extensive collections were made in the field of geology by Professor A. O. Thomas. Mr. Henderson made a practically complete collection of land mollusks, while Mr. and Mrs. Dayton Stoner did faithful and successful work in the entomological field, in which they were very materially aided by both the local and imperial departments of agriculture. The field of

botany had no professional representative in the expedition; but considerable collecting and field work done by Mr. Willis Nutting. A fine series of two species of bats were secured at Antigua.

As already indicated, Mr. John B. Henderson will report on the Mollusca. The reef fishes will be reported on by Dr. Barton W. Evermann, Professor W. K. Fisher will attend to the Asteroidea and Holothuroidea, while the writer will probably report on the Hydroida and Aleyonaria. The other groups have not as yet been assigned.

A large series of excellent photographs, including moving picture films, was secured by Mr. Maurice Ricker, official photographer of the expedition.

C. C. NUTTING

STATE UNIVERSITY OF IOWA,  
August 30, 1918

#### SCIENTIFIC EVENTS

##### THE JOURNAL OF THE AMERICAN CERAMIC SOCIETY

A JOURNAL that is a pioneer in its field is always the subject of most careful scrutiny. When that field is representative of one of the oldest phases of human endeavor the cause for attention to the new publication is multiplied many fold. There has now appeared the first issue of the *Journal of the American Ceramic Society*, a monthly journal devoted to science and technique of the ceramic industries.

The American Ceramic Society belongs to the older family of scientific societies in the United States. The first meeting of the society, which was in reality a little family gathering of a small group of ceramic enthusiasts, was held in Columbus, Ohio, in February, 1899, and from that meeting grew the present organization due largely to the guiding genius of Professor Edward Orton, Jr., of Ohio State University. The society is, therefore, in its twentieth year of vigorous and active life. The membership has increased from that early day until at present there are over 1,000 enrolled in the society.

In the American Ceramic Society, the term ceramic is synonymous with "silicate indus-

tries" and the interests and activities of the society include all branches of the clayware, glass and cement industries as well as enameled wares of all kinds and in addition other closely allied products are included, chief among which are abrasives, gypsum and lime. Few people realize the gigantic proportions of these ceramic industries. The products of the three major divisions alone (clayware, glass and cement) aggregate over \$400,000,000 per annum.

In the earlier days the society consisted of one main organization only. With increased activities and with enlargement in its scope of usefulness it became necessary to organize local sections and student branches as shown in the following list.

##### LOCAL SECTIONS

St. Louis Section  
Chicago Section  
Central Ohio Section  
Northern Ohio Section  
West Virginia Section  
Beaver Section  
New England Section  
New York State Section  
New Jersey Section  
Pacific Coast Section

##### STUDENT BRANCHES

Ohio State University Student Branch  
New York Student Branch  
University of Illinois Student Branch  
Iowa State College Student Branch

The publication work of the society has, up to the present time, been confined to the issuing of our annual volume of *Transactions*. Twenty years ago this was a small feeble effort, very creditable for the then-existing state of our knowledge of the science of the silicate industries. This annual volume has shown continuous growth and the 1917 volume comprises 707 pages of well-edited contributions. The American Ceramic Society's *Transactions* have, for many years, been known throughout the world as the standard reference books on the silicate industries.

This remarkable growth in strength and influence of the society has made it essential that periodical publication of the researches and other activities of the society members be