

## MIGRATION OF A PRIMITIVE SAILING CRAFT AND ITS NAME.

BY WILFRED H. SCHOFF.

ONE of the earliest forms of sailing craft in use from prehistoric times in all parts of the Indian Ocean, is a floating raft consisting generally of two long logs with rising side pieces pinned or more often sewed to the log, wide enough to admit the person of a single rower; two such log canoes being fastened together by a planked flooring laid transversely and supporting a deck structure and rigging. Such craft appear in the earliest known records of traffic in Asiatic waters. The author of the *Periplus of the Erythraean Sea* writing about 60 A. D., mentions them in the ports of southern India and calls them "large vessels made of single logs bound together called *sangāra*." This seems to be the Greek transliteration for the Sanscrit *samghādam* meaning raft.

Dr. Taylor in the *Journal of the Asiatic Society of Bengal* for January, 1847, notes that the name *jangār* is still used on the Malabar coast for these double canoes with superstructures. Bishop Caldwell gives the name as *chamghādam* in the Malayalam dialect, and *jangāla* in Tulu, while Heeren doubted whether the word were indigenous to India and ascribed it to a Malay original. This is indeed quite possible, as the type itself is Malay and is found throughout the Archipelago.

An interesting fact is the existence of similar craft on the coast of modern Brazil and bearing the name *jangāra*. It is perhaps not necessary to assume that the Brazilians were entirely dependent upon India for the craft itself. Primitive man might be expected to discover in many parts of the world that two logs transversely fastened would float a considerable weight, but the identity of name occurring in connection with the identity of type is a striking fact.

It may be ascribed doubtless to the fact of simultaneous colonization by the Portuguese in India and Brazil. It is well known that

the Portuguese ships bound to India after the accidental discovery of Brazil by Cabral, frequently called on that coast on their outbound voyage and that administrative officers were transferred from India to Brazil and *vice versa* in the ordinary course of promotion. Similarly the rank and file of the Portuguese soldiery were so transferred, and it would be a perfectly natural thing for a word found



THE SANGARA IN CEYLON.

in India to migrate to the newly discovered coast of Brazil, or for a certain type of craft which the Portuguese found useful in riding the rough surf of the Indian coast to be imitated by them for the heavy surf found on many parts of the Brazilian coast.

The two photographs accompanying this memorandum show clearly the identity of type; one is from modern Ceylon and the other from the beach at Macció in Brazil.

Reference to the dictionaries shows the same word existing in both the Spanish and Portuguese languages. In Portuguese *janga*



THE JANGARA OF THE COAST OF BRAZIL.

means a small flat-bottomed river boat, while *jangáda* is defined as a float or raft. The interesting point is that the same word in Portugal means a sort of Indian measure, showing clearly the migration of the measure of capacity of an Indian canoe into the current language of the Portuguese. The same word *jangáda* is found in the Spanish dictionary with the meaning of raft, frame or float, while *jangua* is carried into the Spanish nomenclature for a small armed vessel, flat-bottomed, suggesting the raft.

#### EDITORIAL COMMENT.

The information which Mr. Schoff gives us concerning the *jangala* as being in use not only in the Indian Ocean but also on the coast of Brazil, is a straw in the wind which teaches us a lesson of far-reaching significance. It proves that the prehistoric interconnection among the different peoples of the earth has been greater than archeologists ever dared to assume. We have ourselves repeatedly insisted that the same inventions, the development of the same ideas and interpretations, could very easily take place independently in different parts of the

world, and we still insist that such parallel developments are possible; yea, as a matter of fact we do not doubt that now and then they have occurred.

We will mention here two instances selected from the history of science in modern times. There is no reason to doubt for instance that Leibnitz and Newton invented the calculus independently and almost at the same time (about 1674). As they heard from each other, they improved their methods and they could do so the better because they had both independently conceived the fundamental idea.<sup>1</sup>

Of Laplace we know positively that when he proposed his theory of the origin of the solar system he was not familiar with Kant's famous little book on the history of the starry heavens. The two theories are very much alike, and have given rise to calling this theory the Kant-Laplace theory, but if Laplace had known Kant's little book he would have improved his own theory, for Kant's is more correct and at the same time more general. The present objection to the Kant-Laplace theory really applies more to Laplace than to Kant, and yet the similarity of the two theories is great enough for their names to be thus coupled together and their underlying thought considered as fundamentally one and the same.

In selecting an instance from the field of literature, we may here refer to the independent origin of the satires written by Whately and Pérès to prove that Napoleon had never existed. Pérès's little book appeared in 1827 under the title "The Grand Erratum" while Richard Whately, the English archbishop, anticipated the French author by eight years. His book on the same subject was published in the year 1819, under the title *Historic Doubts Relative to Napoleon Bonaparte*, and the treatment is so different that actual plagiarism on the part of Pérès seems excluded.

Here in Mr. Schoff's little article we find the use of a very primitive maritime craft on the most distant shores of the globe. The idea of employing its simple construction must have traveled in an easterly direction from India and the Malay Archipelago through the South Sea Islands to South America and then crossed the continent to the coast of Brazil, the very end of the world to prehistoric man, for we must know that the Atlantic separated the East and the West while the Pacific did not, and we must grant that America was invaded by stray immigrants from the South Sea islands and also by way of the Atlantic.

The most important part of Mr. Schoff's information is the

<sup>1</sup>For details as to the simultaneous development of the principles of the infinitesimal calculus in England and on the Continent see the *Encyclopædia Britannica* (9th ed.), XIII, p. 8.

identity of the very name which establishes the historic connection between these two peculiar crafts. We must assume that there was a greater exchange of thought among the prehistoric peoples than we are inclined to acknowledge, though we may fairly well believe that this exchange of thought was very slow. It must have come about by adventurers or fugitives from one country to another, by traders or travelers who gradually settled in a new home.

It stands to reason that the emigrants of a prehistoric age carried with them their stock of knowledge and inventions, their religious convictions, their belief in ghosts and their ethical standards, their notions of the calendar and also their habits and customs; and any of their ideas might easily take root in their new home. The process of assimilation must have taken considerable time, but we have no reason to deny the migration of the intellectual possessions of primitive man from one place to another.

This conception, however, does not exclude that many ideas were changed in their migration, or also that they came to a new country in the shape of mere suggestions and were actually re-invented by making the people acquainted with possibilities, or informing them of something similar. We may for instance assume that the Frenchman M. Pérès may have caught the idea in a conversation, that if the historicity of Jesus is doubted we might as well doubt Napoleon's existence, and this suggestion could have been made without mentioning either Whately's name or the details of his arguments. At any rate Pérès took it up and developed it in his own way, which has nothing of the ponderous and solemn English style of humor but bristles with terse French witticisms.

We are inclined to say that even the thoughts and inventions which can be traced in their travel from place to place had to be re-invented, and though the main idea may remain the same, the theories transplanted must first be assimilated, and the thoughts must be thought over again before they really take root in their new homes. This is especially true of the Chinese inventions, the manufacture of paper, of printing, of gunpowder, and of the south-pointing needle (the mariner's compass), the principles of which were much better understood and more highly developed in Europe than in Eastern Asia.

The development of civilization in the main follows definite laws, and no man can adopt the inventions, thoughts, or discoveries of other men unless he is prepared to receive them. So far as inventions consist merely in using things furnished, such as rifles, the

transference of an invention is easy; but so far as thought must be adapted to the mind of man, the thought must be thought over again, and this will be possible only if the recipient is ready to receive it, which means if his mind has passed through the indispensable preparatory states which furnish the basis of its comprehension.