SEPTEMBER 13, 1902.

## QUEER CRAFT SEEN ON MY TRAVELS IN THE PHILIPPINES, CHINA AND SOUTH AMERICA. BY E. C. ROST.

Our first view of Manila as we steam on a small launch up the Pasig River to the landing stage discloses a panoramic assortment of shipping not equaled for strange and interesting features anywhere. At times this narrow river with its always rapid cur-

rent is so com-

pletely jammed

or choked with

shipping that

navigation is attended with

Here we find

the huge, heavy casgoes in which

merchandise and

freight of all descriptions are

wharf. These

great danger.



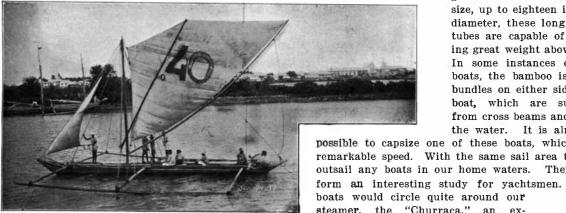
LAKE TITICACA (PERU AND

BOLIVIA.)

transport. ed from the large steamer BALSA (BOAT BUILT OF GRASS) ON anchored in the bay to the

casgoes are of wood, about the size of an American canalboat, and are covered with a bamboo roof, easily removed in sections. Over the after part of the boat the roof is considerably raised, thus forming a roomy cabin wherein live the navigator and family. It was in these boats that most of our troops were taken ashore from the army transports.

Within a few blocks from the Captain of the Ports' office at the landing stage we come to the Binondo Canal, on our way to the central or old port of Manila. On this canal are used very curious ferryboats. They



OUTRIGGER AND SAIL FERRYBOAT AT ILO-ILO, PHILIPPINES.

are small, built of heavy timbers covered with a wooden flooring, over which is erected a skeleton framework of wood, in turn covered with a bamboo roof. Each boat carries about fifteen passengers and is impelled by means of a long pole dexterously handled by the native "fletero."

The change in management' in reference to these ferryboats offered proof that the native is very susceptible to, and capable of, conforming to American customs, which he imitates promptly. For years it had been the custom to have a small tin can fastened directly under the roof of these boats: into this the



CHINESE PILOT BOATS AT HONG KONG,

(NOTE THE CHILD ON THE SACK

## Scientific American

American method of collecting fares. In the river here we see many canoes or dugouts passing back and forth; these are made by the natives from solid logs, which are dug out, and they are impelled with a paddle. It is interesting to watch the natives pass up or down, with

oragainst the swift current. in these small craft laden with all sorts of goods, produce, vegetables, fruits, grass for fodder, etc.

I had the good fortune to travel south from Manila with Gen. Bateson on his memorable trip when he made the now famous bloodless treaty with the Sultan of Jolo, who controls one and one-half millions of people, who are perhaps the craftiest of all Filipinos. Our first stopping-place was at Iloilo, island of Panay, which place had been burned by the natives. The island is famous as being the greatest sugarexporting center in the archipelago. Here are

used the double outrigger ferryboats which are one of the strangest sights in our far-off possessions. These boats are made of huge logs also dug out or burnt out. They are fitted with masts and carry from two to four sails. On either side is a bamboo outrigger which distinguishes them from outrigger boats in other parts of the Pacific, where only one outrigger is used. Bamboo being hollow, intersected by many partitions running crosswise, is practically a tube of many airtight compartments; and as the bamboo

grows to an extremely large size, up to eighteen inches in diameter, these long airtight tubes are capable of sustaining great weight above water. In some instances on large boats, the bamboo is tied in bundles on either side of the boat, which are suspended from cross beams and rest on the water. It is almost im-

possible to capsize one of these boats, which attain remarkable speed. With the same sail area they will outsail any boats in our home waters. They should These

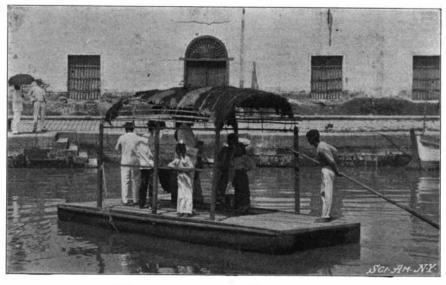
boats would circle quite around our steamer, the "Churraca," an ex-Spanish transport, in a moderate breeze, while we were steaming at ten knots per hour. A landing is effected by running the boats onto the sandy beach, when the passenger steps ashore.

Our next port of call was Jolo, capital of the Jolo or Sulu group, where the negotiations which culminated in the signing of the treaty between the United States and the Sultan of Jolo were carried on. At this place we also find the double outrigger used on all native boats, be they the small dugout for one or two persons, or the huge war canoes of the Sultan, capable of carrying from fifty to eighty people. These boats here are more picturesque, being of more attractive shapes and elaborately ornamented with beautiful carving.

These outrigger boats are also used by the natives in their pearl fisheries,

which industry is next to hemp of greatest importance in the southern islands. The Sultan's people, the Moros, are expert navigators and are known to the

native boats are navigated in nearly every instance by women, who act as pilots for large vessels that enter the beautiful harbor of Hong Kong. It is not unusual to see a woman at the tiller wearing a huge umbrellashaped hat and having fastened on her back a child.



FERRY ON THE BINONDO CANAL, MANILA.

These native boats are constructed of wood and bamboo, are fitted with a mast and carry a set of sails. and are used to carry produce and merchandise from place to place. The native family lives on these small boats, in fact they spend their entire time on the water. For a rudder a very long oar is used and handled in an expert manner by the woman navigator.

The strangest craft I have ever seen on all of my travels were the balsas of Lake Titicaca in Bolivia and Peru. These balsas are made of grass, an aquatic plant, growing in the waters of the lake. The principle on which they are constructed by the Aymaras Indians proves their ingenuity. A bale of hay naturally floats in the water, and according to the quantity of dried grass used in constructing the boat do they control the displacement or carrying capacity. These boats are likewise fitted with a mast and sail, and in some instances carry from eight to ten persons. The Indians travel long distances over this vast inland lake, the surface of which is on a level with the summit of the Jung Frau of the Swiss Alps.

## Diamonds in Guiana.

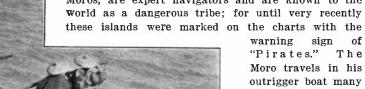
Prof. J. B. Harrison, Government Geologist at Georgetown, states that diamonds have been found in



DUGOUT CANOE, WITH BAMBOO OUTRIGGER. USED BY MOROS, SOUTHERN PHILIPPINES.

three districts of British Guiana-in the north on the upper waters of the Barima River, on the Barima River about Ianna, some 60 miles to the southeast. and in the Upper Mazaruni basin, in a district which, so far as geological indications go, may extend over the tract of country between the head-waters of the Mazaruni and Peruni rivers, though up to now all discoveries have been made about the basin of the Putareng River. There is also the Omai district on the Potaro, a tributary of the Essequibo River, which lies in a southerly direction from Georgetown. This wide diffusion of the gem shows that the chances of enlarging the area in which it may be mined are favorable. The diggings at present are confined to the Putareng and Potaro districts. There are a dozen companies either mining or prospecting in the first named district and others are being formed.

passenger dropped a copper coin. Shortly after the arrival of the troops the discovery was made that certain persons, instead of dropping a copper coin into the can, would drop a small stone or nail, etc. It was the introduction of this latter custom which at once caused the native boatmen to adopt the



Moro travels in his outrigger boat many miles from island to island; his boat and paddle are his most valued possession, not even excepting his wife, who is practically a slave to him.

ATED BY WOMEN.

WOMAN.)

Across the China Sea from Manila, a distance of some seven hundred miles, we find not only interesting craft of All kinds, but that the

## Another Ziegler Expedition.

William Ziegler has sent the relief ship "Frithjof" with a party of explorers to the North Pole. The expedition is entirely distinct from that commanded by Baldwin. Who is commanding the second Ziegler party has not been divulged.