

The Challenger's Submarine Discoveries in the Pacific.

The deep sea explorations of the Challenger have been followed with keen popular interest, and her progress has been frequently marked by important discovery. Her last run from Cape York, Australia, to Hong Kong, lying through the great eastern seas of the Pacific, adds another important chapter to the history of her long voyage of circumnavigation, as also that of oceanic research. One of the party on board, acting as correspondent of the *London Times*, has just given the results of this last cruise, among which the thermal statistics and physical configuration of the sea bottom are most remarkable revelations. By the incessant use of the dredging and sounding apparatus the general structure and temperature of these dark, unfathomed caves of the ocean have been very nearly determined. These submarine tests of the water at all depths from surface to bottom, it is said, confirm the view of Commander Chimmo, an English navigator, as to the enclosure of these Eastern seas. According to this report of the Challenger exploration they are, in fact a chain of sunken lakes or abyssal basins, girdered and cut off from the neighbouring waters by shallow rims or borders. The water, down to the level of the submarine rim, has an unrestricted circulation, and gradually cools with depth. But the entire mass of abyssal water, below the rim, locked off, as it were, from the general circulation is of a uniform temperature, determined by that which washes over its enclosing rim. These deep sea partitions decidedly affect the flow of the icy cold Antarctic waters, which, in the profounder channels or the open Pacific, travel northward along the marine floor to temper the equatorial seas. The Challenger writer affirms with confidence that the sea east of Torres Straits, although having a general depth of 2,450 fathoms, is now proved to be surrounded by an elevated rim having no deeper water over any part of it than 1,300 fathoms, and all the water below having the steady temperature of thirty five degrees. The Celebes Sea, which is 2,000 fathoms deep, is similarly cut off at a depth of 700 fathoms; and the Sulu Sea, though still deeper, is intercepted by a rim rising to within 400 or 500 fathoms of the surface.

The presence of such physical features in the ocean bed must be of great interest to the hydrographer in ascertaining the flow of the waters, which if more obedient to the surface winds that play upon them, are not unaffected by the form of their channels. The interception of the icy Antarctic submarine currents (seeking to find a way northward) by these submarine rims, throws new light on the mystery of the excessive heat of the Western Pacific rivers. In the Atlantic no such barriers retard or prevent the income of the Antarctic drift along the marine floor between Africa and South America. But in the Western Pacific, the supply of cold, sub-surface water being cut off, the tropical oceans become intensely superheated and their basins enormous caldrons of hot water. The elevation of oceanic temperature even in a few degrees, thus accounted for, would work very great results and become impressively felt in the meteorology of the Indian Ocean, and of the great Asiatic Continent, whose southern shores it washes.

These interesting researches will, we understand, be further pushed in the deep sea region lying eastward of Japan, recently gone over by the American explorers in the *Tuscarora*. It is not improbable that these

proposed soundings will clear up some points uncovered by Commander Belknap's survey.—*N. Y. Herald.*

THE LATE BISHOP RICHARDSON.—A correspondent of the *Pictou New Nation* writes of a gallant deed of the late Bishop (once Captain Richardson). While I was doing duty in Kingston, some time in the fall of 1812, the Yankee brig, *Oncida*, and four small vessels came in at the Upper Gap and burned a small vessel at Bath, owned by the Fairfields. They then proceeded toward Kingston. Somewhere about Simcoe Island, or the Lower Gap, they got sight of a small British vessel, (the name of which I have forgotten,) commanded by Mr. Richardson. The Yankees appeared determined to take or sink her, and succeeded in making a hole in her so that she took in water. The lands on board wanted to surrender, the captain declared he would rather sink her, and accordingly ventured to cross a bar which his pursuers dare not undertake. The Captain then laid his course for the nearest land on Kingston side and followed the shore to Kingston, when, as just he got to the wharf, she sank, leaving her deck above water.

AN INTERESTING DISCOVERY.—The latest "interesting archeological discovery," says the *Pull Mall Gazette* has been made in Crete. The monks of a convent which occupies the site of the ancient and once celebrated town of Aptera have dug up two life size female statues, draped after the fashion of ladies who moved in "society" three thousand years ago. The question as to the identity for these statues has, it is stated, raised a lively controversy among local archeologists. By some it is maintained, on the strength of a barely legible inscription on the pedestal of one of the statues, that they represent a daughter of the Emperor Claudius. The inscription is, however, so clumsily cut, and represents so rude a contrast with the exquisite chiselling of the figures themselves, that it is supposed by others to have been made by an inexperienced hand at a much later epoch. The statues, which attract great interest, are to be sent at an early date to Constantinople, to be deposited in the Stamboul Museum. It is to be hoped that centuries hence no one will dig up any female statues existing in this country draped after the fashion of the present age.

The Argentine Republic turret ship *El Plata*, recently experienced heavy weather in the Irish Sea. It appears that after leaving Liverpool, this vessel, which measures 1,800 tons, is 180 feet long, and 45 feet beam, anchored at Holyhead for safety. On Thursday, the 7th of January, she left, and on the following day the wind gradually increased until it blew a gale, and on the Saturday the wind continued blowing with great violence, and a heavy head sea caused great danger and damage to the shipping on all sides. The *El Plata* behaved with the greatest buoyancy, and gave every confidence to those on board. The steering gear, however, became defective, and Captain Boyce, considering the weather and his position, decided to put into Milford Haven. The engines are reported to have worked satisfactorily, and the conduct of the crew in the safety of the vessel has been entirely established.

According to the latest advices from the Carlist headquarters at Estella, Generals Mendiri, Taballo and Tristany have united in a forcible protest against Gen. Cabrera's manifesto in favour of King Alfonso.

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