

to the *westward*, to a large extent, 17,400 to 21,000 feet. The facts show plainly that if this Dolphin shoal was ever emerged as an Atlantic continent, — the fabled Atlantis of speculation, — it never could have contributed any of its detritus to the American continent. It belongs more to the European side.

Another shallow area occupies the middle of the south Atlantic basin in a north-and-south direction ; and at its north end it is prolonged west-northwestward toward shallow areas farther west. Whether the shallow area about its southern extremity reaches into antarctic seas is not yet ascertained. A large shallow area exists on both sides of Patagonia, with a west-northwest trend (see map). It may be continued in the Pacific to the Paumotu and beyond ; if so, it follows the course nearly of the axis of the Pacific Ocean, as the Dolphin shoal does that of the North Atlantic.

The West India sea has three deep areas : that of the Caribbean Sea, 17,000 feet in greatest depth (which has its deepest connection with the Atlantic between Santa Cruz and Puerto Rico, 5400 feet) ; the Cuban sea, or west Caribbean, separated from the east Caribbean by shallow waters — 600 to 4080 feet (100 to 680 fathoms) — between Honduras and Jamaica, with a maximum depth of more than 20,000 feet ; and the Gulf of Mexico, 12,714 feet in maximum depth. The Mediterranean Sea, 2100 miles long, has likewise its three deep-water areas : the eastern or "Levant" sea, about 13,000 feet in greatest depth ; the central, between Sardinia and Italy (separated from the eastern by relatively shallow water, not over 200 fathoms, between western Sicily and Tunis, in Africa), 12,500 feet ; and the western, 9500 feet.

The Straits of Gibraltar are mostly about 900 fathoms deep, but only 160 between Cape Spartel and Cape Trafalgar.

The ranges of islands show the chief courses of shallow water in the ocean, and the bathymetric lines drawn about them, the outline of the basement ridges of which the islands are the summits. Some of the isolated islands, especially those of coral-reef origin, have great depths close about them. Bermuda, in the Atlantic, has a depth of nearly 16,000 feet (2650 fathoms) within 25 miles to the eastward, whence the mean submarine slope is 1:8 $\frac{1}{4}$; and a depth of 12,000 feet exists within six miles on one side and 9 $\frac{1}{2}$ miles on the opposite — making the mean submarine slopes to this depth very steep, they being 1:2.64 and 1:4.2. The small Phoenix Islands, in the central Pacific, stand in a large area of 18,000 to 21,000 feet, and have depths of 18,000 to 20,000 feet between them, with similarly steep submarine slopes ; in one case a slope to the 12,000 point of 1:1.5. At Keeling atoll, in the Paumotu Archipelago, Captain Fitzroy, R. N., found no bottom in 7200 feet at 2200 yards from the breakers — which gives a pitch-off exceeding 1:0.92.

The island chains of the ocean may seem to indicate that great irregularity prevails elsewhere over the bottom of the ocean. But, while abrupt depressions and elevations do exist, the abyssal slopes are in general very gradual. One remarkable exception is the occurrence in the vicinity of the Canaries of a submarine crater a few miles wide and 1000 feet deep. Such cases are most likely to occur in the vicinity of volcanic islands. Whether the great depths south of the Ladrones and the Friendly Islands are craters or not is undetermined.