

information which has come to him from fishermen who ply their trade out in the Gulf of Mexico, thinks that near the center of the Gulf these great fish have a breeding ground, and that they are fairly abundant.

These sharks are most abundant around Ceylon, in the East Indies around Java, north among the Philippines and to the coasts of Japan. Recently a new habitat record in this region has been noted. Mr. J. Dewar Cumming, in his book "Voyage of the Nyanza . . . in the Atlantic and Pacific [Oceans]," London, 1892, says that at Hillsborough Island, the largest of the Coffin or Bailey group, in the Bonin Archipelago, he saw a whale shark, which ". . . must have measured 25 to 30 feet in length, and was at least eight feet across the shoulders. The color was of a bluish-gray, dotted with large white spots."

*Rhineodon* is, however, found most frequently around the Seychelles Islands in the western Indian Ocean, about midway betwixt the equator and the northern end of Madagascar. In 1914-15, an expedition was planned for the Seychelles to study *Rhineodon*, but had to be postponed on account of the great war. With the coming of peace, plans were again made, but in the face of the enormous rise in the cost of transportation, of living expenses and all commodities, another postponement has been necessary. In the meantime a correspondent at Mahé, Seychelles Islands, writes that *Rhineodon* is more plentiful there than ever.

For fuller information (in fact everything known) about this great fish, references may be made to papers by the writer previously published elsewhere.<sup>1</sup>

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<sup>1</sup> "Natural History of the Whale Shark, *Rhineodon typus* Smith.," *Zoologica*, Scientific Publications New York Zoological Society, 1915, Vol. 1, pp. 349-389, 12 figs. "*Rhineodon typus*, the Whale Shark: Further Notes on its Habits and Distribution," *SCIENCE*, 1918, N. S., Vol. 48, pp. 622-27.

## SCIENTIFIC EVENTS

### THE SPAWNING GROUNDS OF THE EEL

THE Bureau of Fisheries reports that Dr. Johannes Schmidt, a distinguished Danish scientist, has recently completed an exploring voyage across the Atlantic in the steamer *Dana*, of the Danish Commission for Marine Investigation. Dr. Schmidt, who is director of the Carlsberg Laboratory in Copenhagen, for about 15 years has been devoting special attention to the fresh-water eels of Europe and America, and is the leading authority on these interesting fishes, which are relatively much more important in western and southern Europe than in eastern America. Dr. Schmidt has made important contributions to the sea life of the eels, and during the recent cruise from Gibraltar to Bermuda and the West Indies collected large numbers of larval eels, with a view to determining the spawning grounds of the European and American eels, which represent distinct but closely related species. Dr. Schmidt says:

I think I am now able, after so many years' work, to chart out the spawning places of the European eel. The great center seems to be about 27° N. and 60° W. [southwest of Bermuda], a most surprising result, in my opinion. The American eel seems to have its spawning places in a zone west and south of the European, but overlapping. The larvæ of both species appear to pass their first youth together, but when they have reached a length of about 3 centimeters the one species turns to the right, the other to the left.

The assistance of the Bureau of Fisheries is invoked by Dr. Schmidt in obtaining further specimens of larval eels taken from waters off the American coast south of Cape Hatteras in summer and autumn; most of the collections heretofore made in that region have been in winter when few eels are spawning.

### AGRICULTURAL WORK AT THE UNIVERSITY OF NANKING

THE latest annual report of the college of agriculture and forestry of the University of Nanking, China, as abstracted in the *Experi-*