

SOUNDINGS OF THE DEEPS IN THE VICINITY OF JAPAN

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Heft III, 1928, page 106 according to the article of F. ZORELL.

In 1926, under the title of "Depths of the Adjacent Seas of Japan" the Hydrographic Department of the Imperial Japanese Navy published nautical charts extending from latitudes 15° and 55° North and longitudes 117° and 158° East on the MERCATOR projection, to a scale of about 1:6 900,000 for the 35° of north latitude. The altitudes and depths are expressed in metres. Two pages of text edited by Sinkiti Ogura give the results of the sounding operations at great depths.

The Japanese themselves commenced systematic hydrologic surveys around the Japanese islands about 1870, which work was completed in the vicinity of the older Japanese islands in 1902, and for the rest of the Japanese Empire in 1917. Deep sea soundings have been made in the Japanese waters since 1874 by the surveying vessels and the vessels engaged in laying the European and American cables. Since that time the Hydrographic Service of the Japanese Admiralty has seriously undertaken the work of taking their own soundings, not only in the metropolitan waters proper but in the open seas in adjacent waters. The results of these soundings were plotted by S. OGURA on a chart which was published in 1925 in N° 3, vol. 4 of the *Hydrographic Bulletin*, which was reproduced in the new edition after revision and completion. The soundings led to the disclosure of great depths with respect to the soundings already known principally in the three following regions:

(1st) The sea of Okhotsk; (2nd) the Sea of Japan and (3rd) in the region comprised between Formosa and the islands of Riukiu to the westward and the Bonini islands to the eastward.

The depths in the Sea of Okhotsk have been little known up to the present. However, the basin of 3300 metres is known, which extends to the southward as far as the Kuriles and Sakhaline.

This basin is quite large, with a very uniform depth, but its northern limits have not yet been explored. (See British Admiralty chart N° 2459). Today the 1,000; 2,000 and 3,000 metre curves have been determined to some extent between Sakhaline and the peninsula of Kamtchatka. The first runs from 145° longitude east to 55° in the north.

Much work has been done in the Sea of Japan in the latitude of the Strait of Tsugura. The bank which extends from the east to the island of Oki and which is not shown on the Groll chart of the "Depths in the Pacific Ocean", but which is shown on sheet 75 on the Stiegler Atlas, is prolonged, according to recent soundings, to the 40th parallel and stretches like a huge arm into the basin of the sea of Japan which has a depth greater than 3000 metres. In the north-east part of this bank soundings of 290 metres only were obtained in 1926.

The Japanese have named this region the Yamato Bank after the surveying vessel. To the northward of this bank there is a basin having a depth of over 3,500 metres, of which the northern limits are not known except that the area of the deeps extends towards the Gulf of Tartary.

As a result of the soundings in the third region, to the southward of the principal island of Japan, between the islands of Riukiu and Bonini, there have been brought to light a number of new characteristics. Comparison with the Groll chart indicates clearly the progress which has been made. The Riukiu channel has been accurately charted. Owing to an erroneous marking of a sounding of 6564 metres in the second edition of the Groll chart (Review of the Geographical Society, Berlin 1913) the channel was given a sharp bend to the southward. The true position of this sounding is shown on the new Japanese chart as being in latitude 22°57' North and longitude 123°09' East. (*Annal. der Hydr.* 1912, page 610). Thus the bend disappears completely. If we take the 6000 metres curve as a limit, the channel is divided into two parts.

by a bank extending to the south as far as the Sanna islands, of which one part running *NE-SW* forming the straight channel, has a maximum depth of 7481 metres, while the other part, East-West which forms one part of the deep channel is located to the southward of the Sanna islands. This section, which forms a deep, if we consider depths greater than 6000 metres, is also worth mentioning in this region. On the Groll chart there is shown an extensive zone with depths greater than 6000 metres between latitudes 15° and 22°30' North and longitudes 126° and 133° East. This estimate is based on a number of soundings in which depths of from 6000 to 6500 metres were obtained. More recent investigations have shown that this zone is a flat basin of a depth of 5000 metres, with separate deeps in which the depth exceeds 6000 metres. Further to the eastward, in the zone where the depth is 4000 metres, new positions have been located at the 139th meridian in which the depth of 6000 metres is exceeded. Finally, the bank which extends from Tokio to the Marianes past the Bonini islands has been very accurately charted.

With regard to the Southern extremity of the Japanese Channel a new branch has also been found. Contrary to the indications on the Groll chart, it divides into separate sections. Although a transverse bank appears on the Groll chart (to the southward of the sounding of 6256 metres) at about the 27th parallel of north latitude, the greater portion of the channel seems to lie more to the southward. In the new chart the transverse bank is considerably enlarged and the channel to the southward shrivels up into a small depression.

The question as to whether the depth of 6250 metres, located directly to the southward of the above mentioned bank, which was obtained by the steamer *Nero*, is connected to the Japanese channel itself, has been left open by OGURA. It should be noted in this connection that at 25 miles from the old sounding of 7955 metres obtained by the *Nero* at the southern extremity of the Japanese Channel, the Japanese surveying vessel *Manchu* found no bottom at 8633 metres. Although not specified by OGURA, it would appear that all of these soundings were taken with the sounding wire.

