In the Lena-Khatanga sector, the surveys were carried out by the small schooner *Pioneer*. A tide-gauge station was established at the junction of the Bulun and the Lena, another near Otstoy Barges I., while two other tide-gauges were established one on Mostyr and one on Pioneer Islands. The surveys carried out correspond to blanks in the charts; a sea survey was carried out embracing the East and West Nordwick Straits, the Urung-Tumus Peninsula and the south-west coasts of Beguichev and Nicholas Islands. An 18-hour series of current observations by means of floats was carried out at the south-east cape of Beguichev I. The range of tide in Nordwick Bay reaches 2 ½ metres, the velocity of the currents attaining 3 knots at the outlet of Khatanga Bay, abreast Preobrajenya I.

Work was completed at the beginning of December. The programme included also meteorological observations, water surface temperature observations, the collection of information to be used in Sailing Directions, and the taking of photographs.

ON THE RESULTS OF SOUNDINGS IN THE VICINITY OF THE YAMATO BANK

by the

JAPANESE HYDROGRAPHIC DEPARTMENT.

(In Japanese. *Suiro Yôhô* (Hydrographic Bulletin) 12 (1933), pp. 427-8, 1 pl.)
Extract from the *Japanese Journal of Astronomy and Geophysics*, Vol. XI, No. 3
National Research Council of Japan, Tokyo, 1934, pp. (42)-(43).

A shallow depth of 465 metres was reported in 1930 in latitude 39°46' N., longitude 133°39' E., in the central part of the Sea of Japan. Accordingly, the surveying ship *Yamato* of the Imperial Japanese Navy made soundings in the vicinity of the reported shoal in 1931 and 1932. The results of the soundings are shown on a chart of scale 1: 600 000. The number of soundings made is over 200, covering an area of about 20×40 sea miles, and the form of the bank is now well established. The minimum depth recorded is 418 metres. Two banks not deeper than 600 metres were found to extend in N.E. and S.W. directions, one having a length of about 20 miles and a breadth of a few miles, and the other of 9 and 4 miles respectively. To the north-west the bottom of the sea falls very steeply to a basin deeper than 2000 metres. To the south-east of the bank, at a distance of about 60 miles, another bank known as the "Yamato Bank", the minimum depth of which is 285 metres, extends in a direction nearly parallel to that of the former from which it is separated by a furrow deeper than 2000 metres.

A NEW VOLCANO OFF THE EAST COAST OF ALAID ISLAND

by

AKITUNE IMAMURA and ZIRÔ KAWASE.

(Extract from the *Japanese Journal of Astronomy and Geophysics*, Vol. XI, No. 3
National Research Council of Japan, Tokyo, 1934, p. 113).

Linking Hokkaido with Kamchatka is a festoon-like chain of volcanic islands, the Kurile Islands (Tisima), of which the nearest to Kamchatka is Shumshir (Simusyu), the next being Paramshir (Paramusiru). About 45 kms. W.N.W. from Shumshir, or 28 kms. N.W. from the northern coast of Paramshir, is Alaid Island (Araido), the northernmost island of the Kuriles.

Alaid is circular and 15 kms. in diameter. Near the centre lies the beautiful cone of Mt. Oyakoba, 2334 metres high. According to Mr. A. UEMATU, who spent more than

a month in the northern seas on board the S.S. *Hakuhô-maru*, a watch-boat (330 tons burthen) belonging to the Fisheries Bureau, a small volcanic islet had formed about 900 metres off east coast of Alaid Island, at a point 155°40'10" E., 50°50'30" N. When he visited the place on the morning of January 26, 1934, it was about 200 metres in diameter and 50 metres high. He approached the islet to a distance of 400 metres, taking photographs from various directions and distances. At first it was emitting white clouds, with scarcely any audible detonations. This state of quiescence lasted for 1 to 1 ½ hours, when, after a few minutes of extreme quiet, it changed suddenly into a violent explosion, shooting up dark clouds to a height of 3000 metres. It then subsided into another monotonous emission of white clouds. The volcano apparently took on the intermittent Strombolian phase, repeating explosions every 1 to 2 hours.

The crater, which is horse-shoe shaped, opens towards the north-east. The solid ejecta carried upwards with the cloud or projected directly from the crater are deposited mostly on the south-west flank of the crater. Needless to say, the new islet is still in process of growth. (It is stated that it has been named Taketomi-zima).

It is reported that the first glimpse of the present eruption was obtained from Murakami Bay, Paramshir Island, on November 13, 1933. Since swarms of volcanic shocks had been felt there in the interval between October 20 and November 10, it is possible that the eruption began towards the end of October, or more probably in early November. The sea where the new islet now lies was sounded in 1932, and found to be about 20 metres deep.

OBSERVATION OF DIP OF SEA HORIZON ON BOARD THE "KASUGA"

by

Tosio AKIYOSI

(In Japanese. *Suiro Yôhô* (Hydrographic Bulletin) 12 (1933), pp. 1-6).

Extract from the *Japanese Journal of Astronomy and Geophysics*, Vol. XI, No. 3, National Research Council of Japan, Tokyo, 1934, p. (41).

This article gives a brief description of the observations of the dip of the sea horizon which have hitherto been carried out by the Japanese Navy, and is followed by the result of observations of the same kind made by the author on board H.I.J.M.S. *Kasuga*, at a height of about 15 metres, on her cruise from Yokosuka to Zinsen, Dairen, Shanghai and return, in September-October 1932, the instrument used being a PULFRICH instrument for measurement of the dip. From the data obtained at 80 positions at sea, the following result was derived: —

$$\text{Actual dip} - \text{normal dip } (1'.776\sqrt{\text{Height in metres}}) = 0'.08\,D,$$

where D is the temperature difference between water and air in degrees Centigrade. The absolute value of the factor D, the determination of which was the main object, was, however, rather too small as compared with those derived in the past. Although the result should not be regarded as definite, because of the poor conditions of observation and chiefly because of the small amount of D (only varying between $+5°$ and $-3°$ throughout the whole voyage), these observations may afford material for further study of the problem.

TRAITE DE GEODESIE

(A TREATISE ON GEODESY).

by

CAPTAIN P. TARDI.

(Paris, Gauthier-Villars, 1934).

Nothing has ever replaced, until now, the treatise on Geodesy by L. B. FRANCŒUR which dates back to 1835 and is now out of print. The lack of a treatise of this kind