

a month in the northern seas on board the S.S. *Hakuhō-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 1½ 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.

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

by

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(In Japanese. *Suiko Yōhō* (Hydrographic Bulletin) 12 (1933), pp. 1-6).

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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.

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## TRAITE DE GEODESIE

(A TREATISE ON GEODESY).

by

CAPTAIN P. TARDI.

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(Paris, Gauthier-Villars, 1934).

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