RÉSULTATS DES CAMPAGNES SCIENTIFIQUES DU PRINCE DE MONACO

(RESULTS OF THE SCIENTIFIC EXPEDITIONS OF THE PRINCE OF MONACO.)
PART LXXXIX, MONACO, 1934.

(1 Volume, 36 × 26 cm., 471 pages, 8 plates and 9 charts.)

The 89th Part of the Scientific Results of Prince ALBERT of Monaco's Expeditions was published on 15th November 1934. This volume contains, in particular, the general list of 3698 oceanographic stations occupied during His Highness's cruises from 1895 to 1915, with a set of track charts.

The book includes also a series of papers on various oceanographical apparatus and notices on the scientific expeditions of the Prince of Monaco, together with a series of photographic views.

MEHRSPRACHIGES WÖRTERBUCH FÜR PHOTOGRAMMETRIE

(MULTI-LINGUAL DICTIONARY FOR PHOTOGRAMMETRY.)

The great expansion of photogrammetrical methods has led to the use, in the different languages and particularly in German, of numerous special terms which must be well understood to appreciate the books written on this subject and the exact meaning of which no dictionary has given until now. This meaning is incidentally all the more difficult to bring out as the other languages, which in general do not form compound words with the same facility as German, do not always possess a precise equivalent thereof.

The dictionary in 5 languages published by the DEUTSCHE GESELLSCHAFT FÜR PHOTOGRAMMETRIE of Berlin and edited by the ALLGEMEINEN VERMESSUNGS-NACHRICHTEN (H. Wichmann, Bad-Liebenwerda, Prov. Sachsen, 8 Rm.) is the outcome of a very thorough undertaking, destined to render many a service.

In the first Part the German terms, classified in alphabetical sequence and numbered, are followed by their English, French, Italian and Spanish equivalents. These terms total 1850; they include practically all the expressions peculiar to treatises on photogrammetry, as well as many expressions relative to geodesy and topography.

Then come the Indexes, one for each of the four languages other than German; the terms therein are arranged in alphabetical order and followed by the dictionary number from the first Part and the number of the page where that number appears. By referring to the page and number in question, the equivalent term in the other language is found.

With this dictionary in hand, the reading of any book on photogrammetry in one of these five languages will be greatly facilitated, and we are entitled to hope that further progress in this science will be the result.

P. V.

HISTORICAL REMARKS CONCERNING THE REYKJANAES-RYG.

(From the narrative of the Danish *Ingolf* Expedition 1895-1896
by CAPTAIN C. F. WANDEL).

When FROBISHER in 1578 returned from his third voyage in search of the North-West Passage, one of his vessels called the *Emanuel* was separated from his squadron abreast Greenland, but afterwards arrived safely in England. The *Emanuel*, which belonged to Bridgwater in Somersetshire, was of the type of vessels which at that time went

by the name of "Buss" — small strongly built vessels with two or three masts and measuring 50-70 tons. For this reason many authors have called her the *Busse of Bridgwater*. The captain of the *Emanuel* reported that he had discovered a large island south-east of Frisland, and that for three days he had sailed along its coast; the country seemed to be very fertile and mostly wooded. From that time all the charts showed an island called *Busse Island* in positions differing a little but on an average in Latitude 58° N., Longitude 30° W.

In 1609, on his third voyage, Henry HUDSON tried to find the island, but without success; later investigations had no better result, but after that time there appeared on all the charts up to the present century, in Latitude 58° N., Longitude 30° W., a place called *versonken Land van Buss*, the implication of the legend being that the island had disappeared on account of an earthquake. Opinion is at variance with respect to the existence of *Busse Island*; some persons suppose that it was a large iceberg, others that it really was an island, only situated at another place than indicated, and finally some have been of opinion that it was a mere chimera or a sailor's yarn pure and simple.

Versonken Land van Buss disappeared by degrees from the charts, but the Greenland traders continued to believe in it and gave the place a wide berth when they had to pass it; later on this belief got a fresh impetus when H.B.M. Ship *Bulldog* took a line of soundings for a projected telegraph-cable, and in Latitude 59°38' N., Longitude 29°35' W., found 726 fathoms, while to the eastward and westward of the place soundings showed 1,200 fathoms. Similar conditions were found more to the southward when H.B.M. Ship *Valorous* on her homeward passage from Greenland, where she had been with coal for NARES's expedition, found 670 fathoms in Latitude 56°0' N., Longitude 34°35' W. This bank was the remains of *Busse Island:* so said everybody who believed that it had existed.

It should further be mentioned that vessels in these waters are alleged to have felt earthquakes. It is, however, an historical fact that no further back than the 1st of September 1885, the brig *Tjalfe*, belonging to the Royal Greenland Company, passed the place and noticed an earthquake. The mate of the brig was walking on deck in conversation with one of the passengers and felt the ship shake three times, each quake lasting one or two seconds; one of the crew jumped up on the rail and looked over the side to see if the vessel had struck floating timber, and the captain came up and asked if they had been rolling casks on the deck. A cast of the lead was taken but no bottom was found. The earthquake took place at 10.45 a.m. The course steered was E. by N. magnetic with a speed of 2.6 knots. The vessel's position at noon by observation was Latitude 58°16' N., Longitude 32°30' W.

The following appeared in the paper *Norsk Sjöfartstidende* of 25th November 1895:-

> "Thursday the 24th of October at 8.15 a.m. on the voyage from Miramichi to this place, when the vessel was in Latitude 52°23' N. and Longitude 32°28' W., breeze decreasing and moderate sea, we noticed suddenly a shaking movement in the vessel, as if it had been dragged along a stony ground. After about 30 seconds had elapsed, the shaking became so violent that all objects on board, loose and fixed, vibrated. It could plainly be seen in the rigging, which vibrated in such a manner, as if the vessel was striking the ground. This lasted about one minute, and afterwards everything was as quiet as before. I am led to believe that it has been a volcanic eruption at the bottom, but it is rather strange that it could be felt with such violence on the surface of the sea, as the depth on the spot was between 15 and 1600 fathoms.
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> Londonderry in November 1895. P. G. PEDERSEN
> Master of the bark *Duisburg*, Christiania."

As can be seen, this earthquake took place several degrees more to the southward than the foregoing one, but in the same longitude.

This much is certain, however, that the aforesaid two soundings by English vessels proved the presence of a submarine plateau; as the zoologists of the expedition were of opinion that it might be of special interest to examine animal life on this spot, I set a course for it. From the soundings, which we commenced at once, it was clear, however, that we were on a very narrow ridge, pointing in the direction of the supposed submarine plateau. The sounding was continued as far as the 60th degree of north latitude, constantly with the same result, proving that the plateau in question was only

a continuation of this ridge. It proceeds from Cape Reykjanaes, the south-western point of the peninsula, on which the effect of subterranean fire is seen everywhere; hot springs, solfataras and mud-volcanoes are found everywhere, and it is probably in case of these safety valves not being adequate that such catastrophes take place, as the one that caused so much damage to Iceland in 1896.

The ridge called *Reykjanaes-Ryg* must be of volcanic origin, and it will be seen from the aforesaid reports from ships that the volcanic forces here also are in constant activity. The ridge from a geological point of view is of later origin; it was formed after the glacial period; this inference may be drawn from the fact that the trawl — at all the drags on the said ridge — did not meet a single rock; not one mesh in the trawl was broken, while, on the other hand, both to the eastward and westward of the ridge, the bottom was strewn with stones, by which the trawl was torn asunder. The proof of the existence of this ridge still further corroborates the conception that *Busse Island* existed, and disappeared by volcanic eruptions (1).

The soundings taken in Denmark Strait and Davis Strait have not modified our knowledge of the depths in these seas in any way.

Soundings were taken as soon as the vessel was inside the 100-fathom curve, both off Greenland and off Iceland. The vessel was supplied with two sounding machines (William THOMSON's) with which — if the depth be not too great — soundings may be taken even if the vessel be sailing at 12-14 knots. With a speed of 8 knots, the normal speed for the *Ingolf*, soundings could be taken with facility in 120 fathoms of water. Instead of THOMSON's tubes the RUNG bathometer was used.

In Davis Strait valuable soundings were taken to determine the position of the banks lying along the west coast, of which it is of great importance to have correct knowledge when making the land.

In Icelandic waters there is still a great deal to be done with respect to surveying of the shoals, and soundings were taken whenever there was an apportunity to do so, and we succeeded in gathering a considerable amount of material of interest for navigation as well as for fishing.

The whole of the work mentioned here has been delivered to the Hydrographic Office to be entered in the charts of the respective seas.

HYDROGRAPHIC DATA.

by

GILBERT T. RUDE

(Extract from a paper read before the Geological Society of America in June, 1933, published in the *Bulletin of the Geological Society of America*, New York, June, 1933.)

In the course of this paper, Captain RUDE directs attention to the economic importance for a country to possess accurate hydrographic surveys of its coasts. By means of comparisons made between surveys dating back to the middle of the last century and the most recent surveys of certain coasts of the United States, the writer shows that the data collated during a survey must be submitted to a severe analysis with respect to their precision. An idea of the manner in which a survey has been carried out may be gathered when attempting to draw the depth contours from the system of soundings. The influence of the spacing of the sounding lines on the original sounding sheet, and that of the intensity of the soundings commensurate with the depth of the water, as well as with the character of the bottom, will thus be ascertained. Attention must also

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(1) *Detailed information is given on the question of* Busse Island *in Volume I, pages* 164-202, *of the account of the Danish Arctic Expeditions in* 1605-1620, *published by the Hakluyt Society in* 1897.