

SUBMARINE MOUNTAINS IN THE GULF OF ALASKA

by

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REVIEW.

Harold W. MURRAY, Associate Cartographic Engineer of the United States Coast and Geodetic Survey, has kindly forwarded to the International Hydrographic Bureau a reprint of an article which he published in the Bulletin of the Geological Society of America (Vol. 52, pages 333 to 362). He gives the principal results of the reconnaissance effected by the U.S. Coast and Geodetic Survey since 1925 and reports on the very remarkable underwater forms which have been revealed by echo soundings in this region, which was formerly believed to be practically devoid of relief.

On the continental shelf a depression of very slight extent to the westward of Prince of Wales Island sinks to a depth of 199 fathoms in the middle of depths of about 45 fathoms, while off the coast one finds mountainous formations (Seamount; see Hydrographic Bulletin N° 1, 1941, page 16) some of whose summits rise to at least 270 fathoms below the ocean surface and from 1900 to 2000 fathoms above the general level of the ocean floor in that region. These formations appear to be very numerous throughout the northern Pacific; they do not appear to have any connection with each other nor do they form part of a large mountain range such as borders the west coast of the United States.

In several places they show very abrupt slopes which lead to the presumption of some special geological cause; but these have not been studied except from profiles still too widely separated and generally oriented east-west.

It would be very interesting to see them developed in more detail by means of special surveys and with the profiles following as far as possible the direction of their greatest slope. Such surveys would doubtless serve to permit a verification in particular as to whether these formations may be considered of volcanic origin, as seems to be the case for several isolated summits already recognized as such in the Atlantic and Pacific and which would seem to be indicated by the large number of earthquakes which have their origin in the Gulf of Alaska.

We reproduce herewith the chart which accompanied the article of H.W. MURRAY. On a scale of about 1: 9,000,000 it gives the contours for every 500 fathoms, as well as the names which have been given to the principal summits derived from the engineers of the Coast and Geodetic Survey who contributed most to the hydrographic survey of this region. We reproduce also several of the profiles which have been located and in which the horizontal and vertical scales have been kept the same (about 1: 300,000).

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