PHILIPPINE EARTHQUAKES AND THE MARINER

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IF the earthquake centers of the world were plotted on a map, we would see a zone of them in an east-west direction in the region of the Mediterranean, Asia Minor and Central Asia. A still more pronounced zone would be seen encircling the Pacific Basin. The Philippine Islands are situated along the western edge of the Pacific Basin, and therefore share in the seismic activity that characterizes the Basin's edge.

Oceanograph surveys around the Pacific have revealed that very great depths are found in many places very close to the land; and, in most places around the Pacific Basin are found high mountainous sections closely bordering the ocean. Hence, there is a very great difference of level between the bottom of the ocean deeps and the summits of nearby mountains; and, the shorter the distance separating these features, the steeper are the slopes involved. In the regions where these abrupt slopes are found, earthquakes are more frequent.

The uplift of the mountains or the downthrow of the deeps, or both combined, have set up tremendous strains in the earth's crust, and these strained and weakened parts give way more readily when subjected to abnormal forces. Such conditions are found along the west coast of South America where the Andes rise, we may say, at the very edge of the ocean. Also along the west coast of Mexico; the Aleutian Islands; the east coasts of Japan and Kamchatka; along the east side of New Zealand; and the east coast of Mindanao. About ninety miles east of Surigao, Mindanao, a depth of 34,218 feet has been located—one of the deepest, if not actually the deepest, known point in the world.

We must not be understood to mean that the east coast of Mindanao is the only seismic area in the Philippines. Similar conditions of sea depth and sea-bordering mountains are found along the west coast of Luzon, and this zone ranks second to the "Philippine Deep" in seismic activity. Other places in the Philippines which can be designated as Seismic are Lamon Bay, east of Luzon; Verde Island Passage; Tablas Strait; Ticao Pass; Celebes Sea; and scattered places near Panay, Negros and Cebu. Some strong earthquakes have occurred on land in the Philippines, but an accurate determination of earthquake locations, technically called epicenters, has established the fact that a large majority of Philippine earthquakes occur under the sea.