

41 THE DIRECTOR OF THE MANILA Observatory at Baguio in the Philippines, Father Charles Deppermann S.J., pointed to a new device on one of the seismographs. "This," he solemnly announced, "is to be known henceforth as the cat's whisker." And no other cat's whisker in the world gets the attention which this one does. For this whisker is a device which rings a bell system whenever the seismograph recorder writes a large red record indicating an earthquake of more than ordinary intensity.

When that bell rings Father Deppermann or Father Bernard Doucette S.J. comes a-running. For if the quake is of a certain kind a message must be flashed to Honolulu where the U.S. military arteries carry it with a calamity priority. Why the rush to announce an event that has already happened? Well, suppose the earthquake occurred at sea. A sea wave or tidal wave may be generated by the earthquake in the floor of the ocean. This wave will travel toward the shore, say of the Hawaiian Islands or the West Coast of the United States. But the sea wave travels more slowly than the radio message. So there is time, but not much, to give warning to ships in harbor or to homes or air bases by the sea.

The Observatory of the Jesuits at Baguio is one of the eight stations in the seismic sea wave warning system. The locations of the other stations will indicate the importance of the Manila Observatory in this chain of stations. The stations at College, Alaska; at Sitka, Alaska; at Tucson, Arizona; at Huancaayo, Peru; at Tokyo, Japan, are under government agencies; the remaining two, in California, are connected with large universities. Only the Manila Observatory is a small private research institution.

Since the restoration of the Manila Observatory at Baguio several seismographs have been in operation. Five of these are very sensitive to earthquakes. Even when no one can feel the earthquake, the instruments amplify the waves that pass through the earth. The instruments make permanent records or seismograms. Of the five sensitive instruments,

three put their records on photographic paper. A spot of light writes the motions of the earth on the film. Two other instruments use pen and red ink to give a record of the nervous agitation of the earth. Besides these five highly magnifying instruments there is a strong motion seismograph with two components. Only when a quake is violent in the Baguio area will this latter instrument write its record. But this record is very valuable. If ever a severe local quake, such as that of 1937 in Manila, comes, the delicate recorders may be violently disturbed even to the point of destruction. So a more sturdy instrument is needed.

But is the work of Father Deppermann and Father Doucette just a matter of recording quakes which have happened? No, but this aspect of the work should not be minimized. For an analysis of these records gives very valuable scientific information about the interior of the earth. Besides if the calamity of earthquakes is to be predicted in the future the basis of such prediction will be the records of the past.

For instance, consider last February 12th, the Chinese New Year Day. At Baguio several people felt the earth shake. Now an earthquake of such modest intensity is not exceptional in the Philippines. Here severe shakes of the earth occur several times in a year. But there was one remarkable feature about this quake. It started a train of quakes. In the short space of fifty hours, from Sunday evening to Tuesday evening, more than a hundred earthquakes were recorded on the instruments of the Manila Observatory in Baguio! None of these quakes was as large as the one that was felt. Yet each of them left a distinct record in red ink.

One hundred quakes in fifty hours! That is a bit of a record. It is no wonder that Father Deppermann did not sleep much these two nights. But more, he will be kept very busy making his analysis of the records written by five recorders for each of these quakes. This is part of the long years of fruitful contributions to science from this priest of God.