

improved by Dr. J. Edmund Woodman, Professor of Geology in Dalhousie University, is published here for the purpose of calling the attention of the teachers and pupils of the schools of Nova Scotia to another item of Nature Study and observation of profound interest in which all can engage with advantage to themselves and Science.

This circular has special reference to the earthquake felt in many parts of Western Nova Scotia on the 21st of March last. Any information gathered from any parties through pupils or teachers will be gladly received by Professor Woodman through the Superintendent of Education, who has agreed to collect all information sent him for compilation by Dr. Woodman.

The form of this circular will also be useful in showing the points of information desired to be obtained about all future earthquakes of which we may have some experience. The circular should be read to the school; and the theories of earthquakes expounded or sketched by teachers who feel they can do so. But even when the teachers can give no exposition of the causes of earthquakes, they can take an interest in studying the manifestations described in the circular, and interest their pupils so as to make them intelligently observant when such strange natural phenomena present themselves.

Any notes on observed earth's tremors sent the Superintendent will be noted by him as well as filed for compilation by Professor Woodman whose reports will be duly published in the Scientific press.

#### QUESTIONS REGARDING THE EARTHQUAKE OF MARCH 21, 1904.

1. *Location of the Observer.*—County and location in County; Township.
2. *Situation of the Observer.*—(a) Indoors (and on what floor of the house) or in open air, on a wharf or boat, in a mine and how deep, (b) Position and occupation at the moment of the shock.
3. *Time* at which shock was felt, Eastern Standard Time.
4. *Nature of the Shock.*—(a) Was any tremulous motion felt before the principal disturbance and for how many seconds? (b) How many principal and prominent disturbances were felt, and for how many seconds did they last? (c) Was any tremulous motion felt after the principal disturbance, and for how many seconds? (d) Did the movement gradually increase in intensity and then die away, or (e) were there two or more maxima of intensity or series of disturbances; and, if so, what was the interval between them and the order of their intensity? (f) Was the principal disturbance strongest near the beginning, the middle, or the end of the series? (g) Was any vertical motion perceptible, and, if so, was the movement first upward and then downward, or vice versa? (h) What was the apparent direction of the movement? (i) In what direction were objects overturned?
5. *Duration of the Shock* in seconds, not including that of the accompanying sound.
6. *Intensity of the Shock.*—Was it strong enough; (a) To make windows, doors, fire-irons, etc., rattle? (b) To cause the chair or bed on which the observer was resting to be perceptibly raised or moved? (c) To make chandeliers, pictures, etc., swing, or to stop clocks? (d) To overthrow ornaments, vases, etc., or cause plaster to fall from the ceilings? (e) To throw down chimneys, or make cracks in the walls of buildings?
7. *Sound Phenomena.*—(a) Was any unusual rumbling sound heard at the time of the shock, and, if so, what did it resemble? (b) Did the beginning of the sound precede, coincide with, or follow, the beginning of the shock, and by how many seconds? (c) Did the end of the sound precede, coincide with, or follow, the end of the shock, and by how many seconds? (d) Did the sound become gradually louder and then die away? (e) Did the instant when the sound was loudest precede, coincide with, or follow, the instant when the disturbance was strongest, and by how many seconds? (f) Did the sound change in character at or about the time when the disturbance was strongest?
8. *Miscellaneous.*—Note any other phenomena which may be related to the earthquake, such as effects on animals, on springs or streams, any change in the wind, (if so, to what direction), permanent displacements of the soil, etc. If the observer was on a boat or wharf, state especially the intensity, apparent direction, etc., of the shock and noise.
9. *Name and address of observer.*

Please answer as many questions as possible, number and letter the answers to correspond with the questions, and forward to the Superintendent of Education for—

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