River east to Gaspé for three weeks. In Virginia and West Virginia, one of the most typical non-glaciated areas of the eastern United States will be studied by students of geography under the direction of Professor Frank J. Wright, of Denison University, Granville, Ohio.

DISCUSSION

SOIL TEMPERATURES AT BOZEMAN, MONTANA, DURING SUB-ZERO WEATHER

DURING the period commencing on January 25, 1936, at Bozeman, Montana, there was experienced the coldest and most extended spell of sub-zero weather ever to be recorded at the Experimental Farm. These records have been maintained for fifty-three years. This cold snap swept over practically all the northern and central United States east of the Rocky Mountains, inflicting much personal hardship on individuals and communities and disrupting all forms of transportation. Not only Bozeman but many places widely scattered over the whole country registered record lows.

Throughout the month of February, at Bozeman, the soil temperature apparatus operated by the Department of Entomology provided many interesting data, emphasizing once more what has been so often forcibly impressed on observers—the great insulating effect of a snow covering.

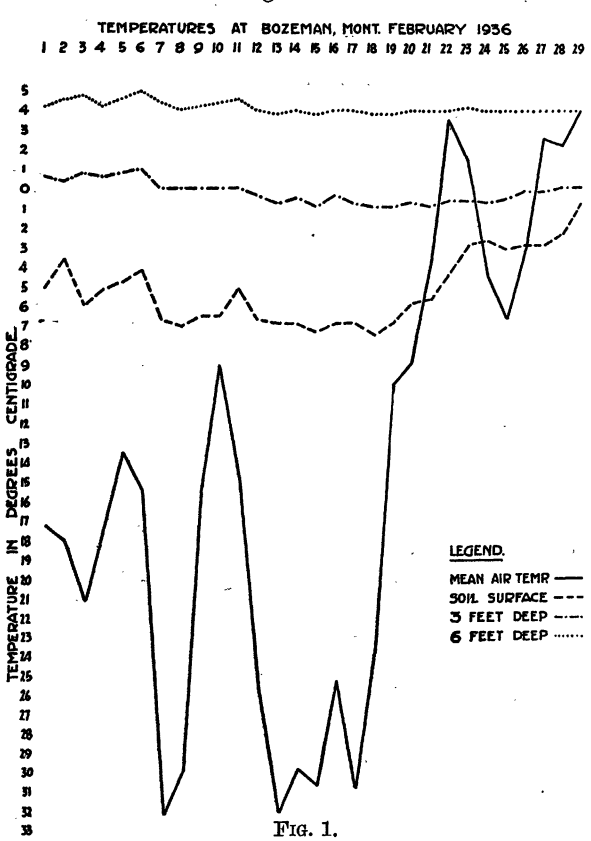

FIG. 1.

From a perusal of the graph (Fig. 1) showing conditions in soil, snow and air, it will be seen that the frost line reached three feet and stayed there for 23 days, and at four feet the temperature was only 1.0° C. above freezing. This is the first time during the six years covered by this study that the frost line has penetrated so far and for such a lengthy period. During all February the snow covering over the instruments varied in depth from 8 to 15 inches. This insulation resulted in a very small fluctuation of temperature under the snow in spite of great variations of air temperature, the minimum temperature at the soil surface being only −7° C. The minimum air temperature for the month was −41.7° C. Also between the minimum of +1° C. at four feet in depth and the soil surface there was only an 8-degree gradient, so that plant and animal life in that first four feet were not subjected to abnormally cold conditions.

It is unfortunate that similar records are not being obtained at more stations throughout the country. Were comparable data available from stations widely scattered and in greatly varying climatic belts, it might be possible to correlate the information so obtained, as regards winter soil temperature distribution, with the distribution of plant and surface-living and subterranean animal life. Certainly such information would be of marked importance in studying the winter hardiness of economic forms of plants and animals.

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THE DODGE, NEBRASKA, "FIREBALL"

BETWEEN 10 and 11 P. M. on the evening of June 24, 1935, farmers who live in the vicinity of the Carl Iske farm, 8½ miles south of Dodge, Nebraska, reported intense light entering through windows on all sides of the house, followed by a loud explosive noise. The day had been hot, with a thunder-storm a short distance to the northward, but no rainfall in that immediate vicinity.

A few days later, a hole was found in the earth in a cornfield which slopes gradually to the south, with clay subsoil. A party, headed by Police Commissioner Frank Meyers, of Omaha; Professor J. L. Cannon, of Creighton University, and Professor D. W. Crouse, of Midland College, had charge of an excavation of the hole, this work being begun on July 22.