

statistics to pass the examination. Fortunately there is one member of the corps of instructors in New York who has been trained to geographic work, and he is a thoroughly competent man. But one instructor cannot well do the work of twenty; it is not surprising, therefore, that occasionally an assistant teacher may be found explaining to a class how "Indians on the Plains catch buffaloes with ropes." Considering the fact, however, that the assistant teachers are required to carry their pupils through a course of instruction in geography without the use of books; with wall maps that ten years ago were caricatures; without topographic models, or possibility of out-of-door lessons; and in view of the fact that the percentage of pupils passed for promotion is too often the standard that determines the teacher's tenure of position, the only wonder is that her work is done so well.

The source of trouble, however, is not so much with the rank and file of teachers as it is with those who train them. With the number of normal schools and the various local assemblies of teachers now supported by the different States and municipalities, there should be better work done in geography. In the main it is fundamentally bad, because the training of teachers is not well done.

To better illustrate the superficialism of the methods followed by a large class of training teachers and instructors, I take as an example the manner in which the inequalities of the earth's surface are discussed before the class. The lessons are not infrequently taught from the moulding board, each feature being represented or reproduced in moist sand. The successive steps are about as follows:

A hill is an elevation of land.

A mountain is an elevation of land higher than a hill.

A mountain range is a succession of mountains joined at the base and ranged in line.

A mountain system includes all the range near one another.

Not only are these or similar definitions made the basis of instruction by the training teacher, but a similar scheme appears in many of the most popular text books. The inventors of the various fads and improved methods dwell—not on the physiographic formation of these features, but wholly on the sequence in which they are presented. Hill, mountain, range, system—this, it is argued, is the only inductive way; any other order, such as range, system, hill, mountain, would be rank pedagogical heresy. That is, the mountain is presented to the pupil as a very large hill, and the range as a windrow on peaks. Had I not seen this same exercise 'time and time again exploited, I should not mention it here. As a matter of fact, however, the essential features could not be more ingeniously misinterpreted.

To begin with, a hill is not a small mountain. From a geographic point of view the hill and the mountain have nothing whatever in common except inequality of surface—just about as much, in fact, as a wen on a man's head and the nose on his face. The hill, it is true, may consist of a mass of detritus thrown up, but quite as often it is formed by circumdenuation. To illustrate this by means of the moulding board would be a highly instructive lesson to the child, but in my experience with instructors and normal school teachers, I have never yet seen it so much as hinted.

Again the mountain is not the unit of orography. Isolated mountains are rare; and wherever they exist, in nearly every instance they are volcanic upheavals. The range, not the peak, is the unit of structure. The essential feature about the range is the fact that it is a wrinkle or fold of the earth's strata. This can be shown in various ways. A few pieces of colour-