

as applied to the assay of minerals, coals and wood.

We need also a special laboratory for soil analysis. For the last six or eight years this department has carried on a systematic investigation of the soils of the state. This investigation includes not only chemical but also the physical examination of soils. It goes without saying that work of such importance cannot be attended to with any carefulness and exactness desirable when it must be shifted from place to place in a general laboratory. The soil analysis laboratory should be large enough also to supply storage room for soil samples and for other materials.

On the instructional side, so to speak, we are in need of a large amount of material for demonstration and illustration. As the amount of technical instruction increases this demand for technical collections becomes imperative. The department should have in connection with its lecture rooms ample rooms for arranging in a systematic way such collections.

The appointment of the director of the laboratory as state chemist makes necessary an office and laboratory where all work pertaining to the state at large can be done.

The sugar school connected with this department, now opening its fourth session, has pressing needs in the way of chart collections, models of machinery, and of standard varieties of beets to properly illustrate and enforce its instruction.

In addition it almost goes without saying that instructors enough should be provided that no one would be obliged to attempt to handle classes of more than fifty individuals.

If the needs of the department as here expressed seem unduly great we can but call attention to the wide range of work the department is called upon to perform. In the first place instruction in a great variety of subjects is given to a large number of students. A wide range of investigation is carried on in connection with the United States experiment station. A large and

constantly increasing amount of work is done annually in answer to demands made by citizens from all parts of the state.

A careful consideration of this side of the question will show that the departmental needs as thus briefly expressed are not incommensurate with the demands that the department seeks to satisfy.

THE DEPARTMENTS OF ENTOMOLOGY, GEOLOGY AND ZOOLOGY.

The departments of entomology, geology and zoology have not only reached their limit of growth in the space allotted to them, but the work has also been seriously affected by the over-crowding. This condition of affairs has voiced itself in the generally approved request for a new building, to be devoted to this work. In the space allotted, it is difficult to do more than hint at some of the disadvantages under which work is carried on at present in these departments. In zoology the limit of the capacity of the laboratory has been reached. In one division, not only every place in the room is filled, but students are working in the private room of the professor, and in the small department library as well, thus materially interfering with the use of these rooms for their proper purposes. In geology the matter is even worse; a laboratory designed for eight students now has to accommodate forty, and double that number endeavor to use it at odd hours or to find poor accommodation at a few tables which have been placed in the lecture room to the detriment of its original use. The lecture room, designed for the joint use of geology and zoology, has been called into use for mathematics, Latin and odd lectures, until it cannot be had by the departments for which it was originally intended, and lectures in two courses are now held in the laboratories. All of these adjustments and makeshifts render efficient teaching difficult; they not only limit the present efficiency of the work but they also check its future growth and expansion.