Not long since, I received an application for the admission to our college of a young lady whose previous training had been in an oral school of good standing. Her preparation for college was not quite complete, and I suggested that she return to her school and secure the needed preparatory training, which could easily be given her there. Much to my surprise, the principal of this school, on learning of the purpose of the young lady's friends to send her to the college at Washington, not only refused to give any aid in preparing her to enter, but declared he would do every thing in his power to prevent her going to college; and the reason for this was simply because in the college the finger alphabet and signs are made use of, and speech (understood to be fully acquired in the schools) is not taught. Thus this principal of a great school was willing to sacrifice the only chance his "very bright pupil" (as he himself characterized her) had for securing the higher education, because of his hostility to the use of a language which his great master, Hill, regards as "a most efficacious means of assisting even pupils in the higher degrees of school-training."

I have alluded several times to the combined-system schools, in which more than seven-eighths of the deaf children now under instruction in America are to be found. In these schools the principle is recognized and acted on that no one method is suited to the conditions of all the deaf. With many the oral method fails; with some it succeeds; for a large proportion the manual method does not meet all requirements, nor develop all the powers; with a few the aural method is to be preferred to the oral or manual.

Those who sustain the combined system acknowledge the value of all these methods in their proper place, and in the institutions they promote endeavor to give to each method every possible opportunity for success. They advise that every deaf child should have a fair opportunity to learn to speak,—as in the community at large every child should have a chance to learn to draw and to sing,—but they advise with equal earnestness that time should not be wasted in trying to force birds to sing to whom nature has given only the ability to caw or to scream.

Ten years ago there was held at Milan an international convention of instructors of the deaf, at which were presented some notable results of oral teaching in the schools of Milan. The convention was wholly in the hands of partisans of the oral method, and they succeeded in securing the passage of certain resolutions giving a preference for the oral method, which were trumpeted over Europe, and were not without influence even in this country. The effect of this was revolutionary in France and Great Britain, and the cause of oralism made rapid advances during the first half of the decade just closed. In England, however, the progress of oral teaching has received a decided check.

In 1885 the Queen of England appointed a commission, with the Duke of Westminster at its head, who was later succeeded by Lord Egerton of Tatton, with such men upon it as Sir Lyon Playfair, Mr. Mundella, Drs. Armitage and Campbell, and others less known in America, but of equal distinction in their own country, whose duty it was to inquire carefully into the methods of educating the deaf, the blind, and the idiotic, with a view of securing much needed parliamentary aid.

The labors of this commission covered a period of more than four years, during which time the promoters of oralism brought every possible influence to bear to secure the approval of their method and the condemnation of all others. They failed in this. While the commission recommended giving every deaf child an opportunity to learn to speak, they recognized fully that many would not succeed, and that for these other methods of teaching must be employed.

But a more decided support to the combined system comes from England as recently as the last month. Benevolent persons interested in securing the establishment of a new school for the deaf at Preston, for north and east Lancashire, formed a commission of four able men, who examined very carefully the most prominent schools in England of all methods. This commission in their report, made Oct. 8, 1890, recommend most strongly a dual or combined system, declaring that "pure oralism is an idea, not a reality; a useless task to dull pupils; unsatisfactory for a large number of pupils; entirely successful only in exceptional cases and under conditions that are generally impracticable and often impossible."

Such opinions, reached after the careful and impartial examination of intelligent men, interested to arrive only at the truth, ought, it would seem, to be accepted as conclusive.

EDWARD M. GALLAUDET.

WORK AT THE NEW YORK STATE AGRICULTURAL EXPERIMENT STATION.[1]

THE work now in charge of the first assistant is as follows:—

1. *Experiments with Swine.*—So soon as enough skim milk, etc., is available, it is expected to conduct the pig-feeding in connection with the dairy cattle experiments, and comparison of the different breeds of swine will be made. For the present the experiments are confined principally to feeding of various coarse foods that have been used and recommended for swine; e.g., corn-ensilage, sorghum, prickly comfrey, beets, clover and clover ensilage, etc.

2. *Experiments with Poultry.*—Feeding-experiments with rations more and less nitrogenous have been made with young and mature laying stock; and these experiments extend always throughout the whole laying season, some of both large and small breeds being used. Feeding-experiments are being made, and have been, with capons and cockerels. Experiments have been made with home-made and inexpensive incubators and brooders, and it is expected to continue them. Preparations are now nearly completed for breeding-experiments with tested individuals of several breeds. Considerable chemical work has been done, and experiments are now (although temporarily interrupted) in progress to answer the question definitely whether inorganic material, as stone, oyster-shells, etc , can supply lime for the egg shell. Experiments to ascertain the cost of production and value of product, in rearing chicks of different market breeds from the shell, under different foods and methods of hatching and brooding, are expected to be undertaken.

3. *Soil Experiments.*—The laboratory work on soils has been for the present discontinued, but only from pressure of more immediately necessary work. In the field, application of several cheap chemicals has been made; viz., sulphate of soda, sulphate of lime, sulphate of magnesia, sulphate of iron, carbonate of lime, common salt. The effect on the crop and soil is studied. These have only been applied one season, but it is intended to repeat the application several years on the same strips of soil under different crops.

4. *The Investigation, Selection, and Acclimatizing of Sorghums.*—Of the two or three hundred samples of seed, representing a hundred and fifty or more varieties that have been grown during the last three seasons, less than a dozen have been selected for

[1] From the Geneva Gazette, Nov. 14, 1890.

future use as of value in this State. Among these, however, are some very promising varieties. This necessitates, besides work in the field, much chemical work, analyses of juices, etc.

5. It is also proposed to enter upon another line of work with our pasture and meadow grasses,—the selection, preservation, and propagation in absolute purity, by sod-culture and seed, of the most vigorous and hardy strains and individuals of the most valuable varieties. It is hoped to establish the better types as standard by co-operation with some other stations, and to supplant the degenerate varieties so largely used.

Maps, charts, plans, and drawings for purposes of illustration of station work, have also been made.

In the chemical department the following work is in hand: 1. Analysis of milk of registered cows undergoing experiment (this work involves at present the complete analyses, each week, of from ten to fourteen samples of milk, and the extent of the work will increase until the whole herd is in milk); 2. Analysis of skim milk, buttermilk, and butter, in connection with the foregoing, requiring at present from fifteen to twenty-one analyses each week; 3. An extended investigation into various methods of creaming, requiring at present seven analyses each week, but soon the work will be increased threefold; 4. Analyses of all the feeding-stuffs connected with various experiments being carried on at the station; 5. Analysis of fertilizers in accordance with the recent law establishing a fertilizer-control at the station; 6. An investigation into the influence of acidity of cream upon the quantity and quality of butter produced; 7. Experiments relating to a more accurate method for the determination of fat in feeding-stuffs; 8. Experiments relating to a simple method for the determination of nitrogen in nitrates; 9. Analysis of various things sent to the laboratory from different parts of the State.

The work being carried on in the horticultural department is a continuation of that of last season, with the addition of such other lines as have been thought best. The leading features are (1) tests of the novelties in vegetables as to their desirability and commercial value; (2) tests of vegetable seeds, especially cauliflower and cabbage, to ascertain the value of American-grown seed as compared with imported seed; (3) the acclimatization of vegetables not native to this climate, notably the sweet-potato, with which very successful results have been obtained; (4) the forcing, under glass, of such vegetables as seem best adapted for that purpose; (5) tests of varieties of small-fruits, which consist in the study of the varieties as to their commercial value and adaptability to the climate of this State; (6) also, so far as facilities offer, work in cross-fertilization, tending to the improvement of varieties and the special study of pollen influence. This line of work is of very great value, and a large part of the greenhouse has been set apart for the continuation of it through this coming winter, as there are, from the results of last winter's crossing, over one thousand seedlings to be tested; and the data, if as valuable as expected, should be before the public as soon as possible.

The above is in connection with the daily routine of note taking, and records made of the planting, germination, growth, habit, blossoming and fruiting season, of all plants in this department, a large number of which notes are merely for reference, and are only inserted in our record books, making no showing that would lead the public to know what a vast amount of constant painstaking work is necessary to keep records that become of greater value year by year.

In the pomological department the testing of the large fruits and of the varieties of grapes is being carried on as heretofore, and a study made of their habits of growth, vigor, susceptibility to disease, hardiness, and adaptability to this climate; also of the diseases affecting the different fruits, especially the grape. Experiments are being continued with fungicides and insecticides, with the object of obtaining simple and effective remedies for the holding in check or entirely ridding our orchards and vineyards both of fungi and the insect pests that are rendering such a large proportion of our fruit worthless. A more extended line of experiments is being planned for the coming year, intended to embrace a larger field; and some of them will be carried outside the station limits through the courtesy of nurserymen and fruit-growers, a number of whom have offered to place the necessary land and stock at the disposal of the station. It is intended that a portion of this work shall be devoted to experiments with fertilizers. In connection with this, an object-lesson in the chemical composition of the ash of four leading fruits (apple, pear, plum, and cherry) and of two of the woods (grape and apple) has been prepared, showing the amounts of the different fertilizing and mineral elements removed from the soil by the growth of 150 pounds of each of the fruits named, also by 100 pounds of the wood of the grape and apple. It is intended for use at the fairs, farmers' clubs, and meetings of fruit-growers, and for use at the station.

As a portion of the general farm-work has been included in this department, a considerable amount of routine work has necessarily to be performed. Experiments have also been started with cereals and grasses, to test varieties and methods of seeding. Others are planned with fertilizers, ensilage, crops for soiling, and methods to obtain the best and most economical results.

In addition to the above regular and systematic work of investigation going on at the station, there have been published during the past year, in addition to an annual report of several hundred pages, seven bulletins with an aggregate of 173 pages, 45,000 copies of which, in all, have been distributed among the farmers of the State; while the correspondence has steadily and rapidly increased from a total of less than 500 letters in 1887, to over 2,000 during the past year, many of these letters of inquiry necessitating study and investigation.

NOTES AND NEWS.

THERE are few injurious insects for which more remedies and preventives have been recommended than for the striped cucumber beetle, — the everywhere abundant yellow "bug" with black stripes along its back, which attacks squashes, cucumbers, melons, and in fact nearly all cucurbitaceous plants. A large portion of these remedies are doubtless worthless, if indeed not positively injurious. In order to get a more definite knowledge of the preventive or remedial value of these various substances, the Ohio Experiment Station began last season a series of experiments in which it is designed to give each a practical field test, and, if possible, to arrive at some reliable conclusions for the guidance of the interested public. The results of last year's work showed that many of the so-called remedies are worthless, some even being worse than the disease. The experiments were continued this year on an extensive scale. A field of two acres was put in good condition by the use of plough and harrow, and was planted to squashes, melons, and cucumbers according to the ordinary plan of growing these vegetables. The seeds came up early in June, and the first striped beetles appeared soon after. They then came in great numbers, and destroyed a large number of plants before they could be treated. Two general methods of treatment were employed: (1) coating the plants with poisonous substances, and (2) fencing out the insects by mechanical barriers. The best success was attained in the first class of remedies by the use of tobacco-powder,— the refuse packing of the cigar-factories. A number of barrels of this substance were obtained at a cigar-factory. A shovelful of the powder was thrown on each hill. The first application was made to eighty hills, June 12. Rains coming soon after, it was repeated June 14, 16, and 17. The results were excellent. The beetles seemed to dislike working in the tobacco, and the plants on all the hills so treated came through in good condition. Aside from its value as an insecticide, the tobacco acts both as a mulch and fertilizer. Chemical analysis shows that its value as a fertilizer is twenty five dollars per ton. In many Eastern cities it is being utilized, but in Columbus and other Ohio cities many of the factories are glad to give this refuse to any one who will take it away. Various methods of mechanical exclusion of the beetles were again tried with good success. This may be done by simply placing over the plants a piece of thin plant-cloth or cheese-cloth about two feet square, and fastening the edges down by loose earth. It is better, however, to hold the centre of the cloth up by means of a half barrel-hoop, or wires bent in the form of a croquet arch. It is frequently stated that