

one-half in numbers of all migrating birds, reach or pass us, we are visited by a large series of birds, mostly small ones, which go further north to breed. The following have been observed in our oak: Nashville, parula, yellow-rumped, black-throated green, Tennessee and Wilson's warbler and the water thrush, while the black and white creeper and Blackburnian warblers remain to nest to some extent in the county.

Among the vireos, three, the warbling, red-eye and yellow-throated, occasionally visit our tree, and all nest in the county. The blue-gray gnatcatcher, although a woodland species, occasionally wanders to our oak.

Three species, the bluejay, robin and chipping sparrow, have rested in this tree during my observations.

It will occupy too much of your space to enumerate the many species of insects which have been found feeding on the foliage or resting on the trunk or limbs of this one tree, but enough observations have been presented to suggest the value of continued notes, even on the visitors to one Oak Tree.

There are many common species of birds which have not as yet been recorded, and many of them are to be looked for and may still be added to the list. A number of birds have been seen which could not be identified, and these instances have always been ignored, the above list being exact.

THE USE OF TUBERCULIN AND MALLEIN FOR THE DIAGNOSIS OF TUBERCULOSIS AND GLANDERS IN ANIMALS.

SHORTLY after the announcement made by Koch of the effect of tuberculin, the product of the growth of the bacillus tuberculosis, upon man, the idea was suggested that tuberculin would be a very useful agent for diagnosing tuberculosis in cattle. This is often a very difficult matter, and the advantage of a sure method of diagnosis was at once apparent.

While it is probably true that unless the udder of a milch cow is diseased there is but little danger of the milk being contaminated with the consumption germ, the diseased animals even with incipient cases are fruitful sources for the infection of other animals as well as man.

Just to what extent man contracts tuberculosis from cattle and other animals, and *vice versa*, to what extent animals contract this disease from man is not known and would be very difficult to determine. The probabilities, however, point in favor of the fact that cattle are often the intermediate agent in the production of consumption in man.

A small quantity of tuberculin injected into cattle suffering from tuberculosis will cause, in diseased animals, a rise of temperature of two and a half to five degrees Fah., within eight to ten hours after the injection, while healthy animals for the most part do not respond to this test.

A large number of experiments with tuberculin have been conducted, especially in Germany and France, and in general with satisfactory results. Some few cases have been noted where the animals did not respond to the test of tuberculin, but upon section proved to be diseased, while a few others that were not diseased showed a slight reaction with the tuberculin. In the first cases, however, the activity of the tuberculous lesions was not demonstrated by inoculations. It is well known that old, inactive lesions may be found in animals that have been slightly diseased and recovered. In the second cases the autopsies have not always been sufficiently close to prove the entire absence of disease, as there has not been an examination of the bones and spinal column. It is further possible, that the cause of infection might be present in

the animal without having reached a sufficiently advanced stage for lesions to be apparent.

With a view of making tuberculin of practical value and eventually stamping out consumption among cattle, the Department of Agriculture has begun a series of experiments, and the report of the Secretary of Agriculture for 1892, recently issued, contains a statement from the Biochemic Laboratory of the Bureau of Animal Industry, of some of the results obtained. In this laboratory a number of tests have been made as to methods of manufacturing tuberculin, and the Bureau has been prepared, for some time, to furnish tuberculin of its own manufacture to Boards of Health, Experiment Stations and State Veterinarians, for practical use.

In addition to these experiments this laboratory also manufactures Mallein, obtained from the growth of the bacillus malleus. The mallein is used for diagnosing glanders in horses and has proved exceedingly valuable. Through the efforts of the Bureau of Animal Industry, this product has been widely distributed in the States, and its use in different hands has proven very satisfactory. In many instances, by its means, the disease in apparently healthy horses has been detected and by the destruction of the animal the source of infection for valuable stock removed and considerable property saved.

As the tuberculin and mallein are made thus under government control and in one laboratory, the product is uniform in character, and can be prepared at a very much less cost than the imported tuberculin can be purchased. By the use of these two diagnostic agents the Department hopes to be able to do a great deal in the way of exterminating two dangerous diseases. Whether or not it would be practical to stamp out tuberculosis among cattle by killing all diseased or suspicious animals, is a question, but it would be possible by the use of tuberculin and proper sanitary regulations to check the advance of the disease and confine it within prescribed areas.

It is along this line of investigation that advance in the future, in human and veterinary medicine, will be made, and the Department of Agriculture in looking to a control of tuberculosis and glanders is keeping in view, not only the best interests of the agricultural classes, but of the people in general.

"Bros."

NOTES AND NEWS.

IT HAS been said that "the little red schoolhouse" was the corner stone of American civilization, and from the very force of sentiment and historical memories the country school of New England retains its hold upon thousands who may have never entered its doors. In "The Country School in New England," written and illustrated by Clifton Johnson, the author describes the winter and summer terms, the scholars in their classes and at the blackboard, their punishments, their fishing and coasting, their duties and amusements on the farm—in short, the every-day life of the boys and girls of rural New England in the days of our fathers and our own. Every phase of his subject is aptly illustrated with pictures from life. There are over sixty illustrations in this book, which is to be published immediately by D. Appleton & Co.

—A scientific session of the National Academy of Sciences will be held in Albany, in the Capitol, Nov. 7, beginning at 11 A. M. Members who have papers for this meeting may send the titles to Prof. Lewis Boss, Dudley Observatory, Albany, New York. A special stated session of the Academy is called for Wednesday, Nov. 8, in Albany, to consider the President's Annual Report to Congress, and other business that may come before the Academy.