

were purchased by him in 1859, and forwarded to this country in May, 1860. These were distributed among several of the best bee masters, and they at once set about the rearing and sale of the queens of the new race. Thus it was that the Department succeeded where private enterprise had failed in this most important undertaking. Those who wish confirmation of this statement will find it in the agricultural report for 1859, page 543, and in that for 1863, page 530. The former is a letter written by Mr. Parsons while in Lausanne, Switzerland, and the latter is an extended article on the Italian honey bee by Mr. Richard Colvin, a competent authority, and who had been one of the private parties who had tried during the years 1858-60 to import this particular breed from Europe.

It were beyond the scope of this communication to enlarge on the merits of the Italian race of bees, particularly as Mr. Benton has treated us to a communication on the varieties of bees; but I may be pardoned for calling attention to what I believe to be a truth which all will admit who are familiar with the progress of apiculture in the United States during the past thirty years or more: namely, that the benefits, direct and indirect, which have accrued to American apiarian interests through the introduction of the bees of Italy, far exceed the few thousand dollars which, all told, the Department, from the time of its organization to the present day, has expended in the development of this industry as one of our nation's sources of wealth. As will appear from its report for 1877, the Department was earnestly solicited to appoint a commission for the purpose of gathering statistical information as to the condition and growth of bee-keeping in the United States; to communicate with the largest and most successful bee masters and secure their methods of wintering and otherwise managing bees; to test modern and improved apiarian appliances and recommend such as are worthy; to point out the most favorable bee ranges in the country; to encourage the cultivation of honey producing plants, and to educate bee men to use caps and crates of uniform size for commercial convenience. The Department had, however, neither the means nor the power to organize such a commission as was urged.

In 1885 I was enabled to establish, in response to what I felt was an evident want, an apicultural station, having fortunately the full sympathy of Commissioner Colman in the work. The station was located at Aurora, Ill., and Mr. N. W. McLean, an enthusiastic and well informed apiarist, was placed in charge. The reasons for

establishing the station, and the objects in mind, I quote from the introduction to my report as Entomologist for that year:

"Among the subjects which I desire to have investigated in addition to some of more purely scientific interest, are the following:

(1.) To secure the introduction and domestication of such races of bees as are reported to possess desirable traits and characteristics; to test the claims of such races of bees as to excellence, and to prove by experiments their value to the apiculturists of the United States, and their adaptation to our climate and honey-producing flora.

(2.) To make experiments in the crossing and mingling of races already introduced and such as may hereafter be imported, and by proper application of the laws of breeding endeavor to secure the type or types best adapted by habit and constitution to the uses of practical bee-keepers in the United States.

(3.) To make experiments in the methods of artificial fertilization, and, if possible, demonstrate the best process by which the same may be accomplished.

(4.) To study the true cause or causes of diseases yet imperfectly understood, and the best methods of preventing or curing such diseases.

(5.) To obtain incontestable results by intelligent experiments on scientific methods, as to the capacity of bees, under exceptional circumstances, to injure fruit; i.e., to set at rest the ever-discussed question of bees *vs.* fruit.

The experiments of the first year—the station having only been started in June—had reference to economy in the production of wax; feeding devices; the wintering of bees, and the question as to whether bees injure fruit; the artificial fertilization of queens, etc. In 1886 the experiments as to whether bees can injure fruit or not, were continued, and Mr. McLean's report contains the results of experiments and observations as to wintering bees, the prevention of spring dwindling, bee forage (especially in regard to plants, etc.) diseases, particularly foul brood, and the control of fertilization in confinement. These last two subjects received special attention again in 1887, and experiments in mating queens to selected drones were made. In Commissioner Colman's report for 1888 occurs the following paragraph in explanation of the cessation of the apicultural experiments:

"Owing to the lack of specific appropriation, it has been necessary to discontinue the apicultural experiment station. This is to be regretted, as the station has done good work and as it has accomplished results of considerable benefit to this ex-