

TWENTY-NINTH ANNUAL REPORT
OF THE
NEW JERSEY STATE
Agricultural Experiment Station

AND THE
TWENTY-FIRST ANNUAL REPORT
OF THE
New Jersey Agricultural College Experiment Station

FOR THE YEAR ENDING OCTOBER 31st

1908

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received. It was the old species, *C. asparagi* that was generally noted, only a few specimens of the 12-spotted form being received. Apparently the winter conditions were favorable to the hibernating adults, and they made their appearance in force as soon as the sprouts showed above the surface. Growers who were familiar with the insect at once permitted some of the poorer shoots to grow, and these proved more attractive than the undeveloped heads. Unfortunately the matter was not followed up in most cases by cutting and destroying the trap shoots as soon as they became covered with eggs and, in consequence, there was a very heavy brood of larvæ which very seriously injured the plants in many fields. Combined with the effects of the rust, this feeding produced a decidedly disreputable lot of asparagus fields in most sections of the State. There was not much complaint of trouble in young fields, and the infestation on such places seemed to be very slight.

DIGGER WASPS VERSUS CIDADA.

A peculiarly interesting feature of the year has been the increase of the large, Cicada-feeding digger-wasp, *Sphecius speciosus*. This is the largest wasp that we have in New Jersey, and



FIGURE 6.

Digger wasp carrying a Cicada to its burrow. From U. S. Dept. of Agriculture.

during the five or six years last past it has become increasingly abundant, making its colonies in open, bare or sparsely covered ground. The females dig holes which go down vertically for a

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short distance, and then run a longitudinal gallery with cells or pockets opening from the sides. In these cells they store the Cicadas on which the larvæ feed, sometimes two or three in one cell. The wasps capture and sting the Cicadas so as to paralyze, while yet retaining sufficient vitality to protect them from decay. So abundant did they become in some places, that they got to be a good deal of a nuisance, especially as they look rather formidable and certainly do have a long and vicious sting. But they are not really aggressive and do not sting unless directly interfered with.

At New Brunswick they were so numerous in 1908 that they practically exterminated the Cicadas in that part of the City in which I live. In former years the singing of these Harvest flies on the trees of the College Campus and the adjacent avenues was quite a feature, and specimens were frequently captured. This year the songs were brief and not a single specimen was taken. As the Cicadas are not really harmful to the trees and their "singing" is a characteristic summer sound, the disappearance is rather to be regretted. It will be interesting to note what effect this lessening of its prey will have upon the wasp.

CHINESE MANTIDS.

Heretofore the records concerning the introduction of this species into New Jersey have been distinctly discouraging and even yet there is nowhere in the more northern portions of the State any well established colony. There is reason to believe, however, that the species is maintaining itself at almost every point where it was colonized altho in most places that is about all that can be said of it. At New Brunswick I find an egg mass or two in my garden each year. In Burlington County at least two colonies have maintained themselves so that specimens are noticed each year and there is one colony in Atlantic County.

At Anglesea, Cape May County, Mr. Philip Laurent from whom I obtained all of my egg supply, himself put out egg-masses in considerable number for several years, and there is now, at that point a flourishing colony which seems well established and likely to increase. This colony will be kept under observation, and whenever egg masses are present in sufficient abundance they will be taken to the mainland and the attempt made to establish them near Anglesea Junction and perhaps elsewhere on the Cape May peninsula. It seems very curious that this insect which finds conditions so much to its liking near Philadelphia, should fail to do well in apparently similar localities in New Jersey.