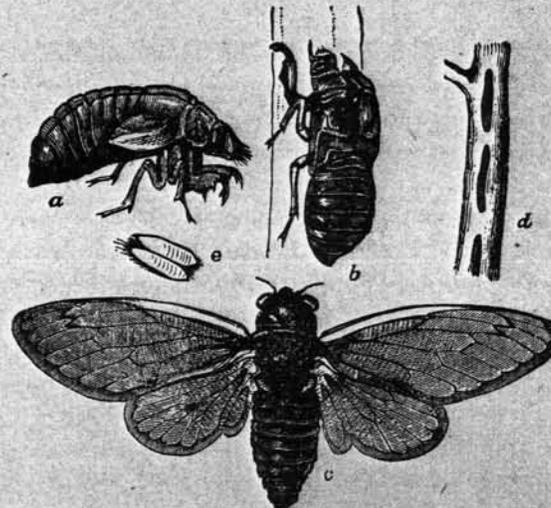


THE PERIODICAL CICADA.***Tibicen septendecim.***

Just seventeen years ago I wrote in my first Report as Entomologist to the Experiment Station: "There will be many who contend that the insect appears every few years and that the seventeen-year period is only imaginary, while others who have observed them in one locality only will ridicule the assertion that they are met with in any years but those shown on their own records." At that time also I listed the broods known to occur in New Jersey and gave their distribution as shown from the records.

**Fig. 18.**

The Periodical Cicada: a, pupa ready to change; b, empty pupal shell; c, adult; d, cavities to receive eggs; e, eggs, enlarged.

Every brood then listed has appeared on schedule time, and in my Reports for 1894, 1898 and 1902 will be found accounts of the broods occurring in those years. Since 1889 our knowledge of this insect has increased so that instead of twenty-two broods known at that time we now record thirty, as worked out by Mr. Marlatt in circular 45, second series of the Entomological Division, United States Department of Agriculture.

Brood No. VIII. in my Report for 1889 is now No. XIV. of Marlatt, and its distribution was given as "the southeastern part of Massachusetts, across Long Island, along the Atlantic coast to Chesapeake bay, and up the Susquehanna at least as far as Carlisle, in Pennsylvania; also in Kentucky, at Kanawah in West Virginia, and Gallipolis, Ohio, on the Ohio river." No definite localities were then known in New Jersey, but as the results of my investigations, four points were established: Englewood, Bergen county, along the Palisades; Princeton, Mercer county; Palmyra, Burlington county, and Red Bank, in Gloucester county. This makes a diagonal but disconnected line across the State, and nowhere did the insects occur in any numbers.

My experience with the more recent broods and the observations made of the deadly warfare waged by the sparrows on these insects inclined me to the belief that the brood would appear in greatly reduced numbers during the current year, if at all, and I therefore asked a large number of the office correspondents to keep a lookout for the species, and to send in reports and specimens should any occur in their locality. The members of the Brooklyn, New York, Newark and Philadelphia Entomological Societies were also asked to co-operate, and the office staff was charged to observe any signs of the insects' presence and to question farmers everywhere.

The result was entirely negative; not a single specimen was received from any locality within the State; not a sign of their presence was noted, and all reports of their occurrence when investigated proved to be unfounded. This brood seems to have been completely eliminated, or so greatly reduced in numbers that nothing was seen of it. On Long Island and in Pennsylvania the insects appeared in their usual numbers, and I believe that in other parts of their range they were also observed. On Staten Island a few pupa shells were found, indicating that the insect did appear there.

Mr. Dickerson, in the course of his inspections of orchards and nurseries, covered the entire ground of its appearance in 1889 and made special trips to Englewood and to the woodland area between Princeton and Rocky Hill during the period of their usual occurrence. Nowhere did he find any trace of the species.

It is more than probable that the remaining broods will become less numerous at each appearance as the forests are cleared and as

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the sparrow domination increases, but it will be many years before this interesting species disappears from our fauna. Its absence this year was not unexpected, because in 1902 I wrote: "The brood is a small one, the area of its appearance is limited in well-settled regions, and it is doubtful whether in 1906 it will be noticed at all."

SHADE TREE INSECTS.

Attention has been called to the fact that increased interest has been and is now being manifested in city shade trees, and that Bulletin No. 181, dealing with the insect enemies of such trees, has been in constant demand, until now very few copies remain. The municipalities that began work in the recent past have continued their operations and have increased them in extent, while others have either begun work or have manifested a desire to do so. In a greater number of cases individuals or bodies of individuals have taken up the matter in smaller cities, towns and villages, and in all cases where applications were made to the office prompt attention was given and such recommendations were made as seemed to be demanded. In every instance it was made clear that it was the desire of the office to co-operate to the extent of its ability.

Newark.

The most complete organization for the care of shade trees exists at Newark, where the work is in the hands of a shade tree commission with large powers and a liberal appropriation.

April 13th, Mr. Dickerson went over the city, in a general way, with Mr. Carl Bannwart, the secretary of the commission, who is in general charge of the field work. It was found that as to the cottony maple scale the prospects were that it would be present in much smaller numbers than in 1905, although locally there were trees as badly infested as at the same period last year. This was offset by other localities in which the natural enemies had made an almost clean sweep, and almost everywhere conditions were much improved.

Oyster-shell scales were present in numbers on some poplars and other trees, and an *Aspidiotus* on maples was obvious in some places.