

daughters can accompany their husbands, fathers and brothers, and when we consider the mighty influence which women exercise over us, we should take them with us. There is no man who is not lost to all feelings of humanity but will restrain himself in their presence. Let a man be ever so wicked, yet in the presence of ladies he will bridle his tongue. Then, if woman possesses in herself so wonderful a power over man; if she possesses such an influence to keep men in the path of rectitude, what man is there who is unwilling for her to belong to the Grange, which was wisely organized for her benefit as well as his. I have one wish, one strong desire, and that is, to see the wife and daughters of every farmer in our Empire State coming into the Grange; then would there be a most glorious prospect in view for the agriculturist; then the young would flock to the Grange halls and join in the noble effort to elevate the standard of the farmer of the country; there would be no talk of the lukewarmness among our members, and such a thing as a dormant Grange would never be heard of, and the agricultural horizon would brighten and shine as if ten thousand electric lights were burning. My sisters, as Samuel Isham has said, the destiny of this country and of this whole nation, as well as the Order of Patrons of Husbandry, rests with you; will you sit idly by and not help extend its principles? I can not, I will not believe it. When you rise up in the morning, let your prayers ascend on high, in behalf of a country which is fast being carried by political hate and trickery into the vortex of destruction; let your prayers ascend as holy incense in behalf of the farmer's cause; and then we shall be blessed with bountiful harvests, and when called to lay down our implements on earth, we shall enter into that Grange above and receive the welcome plaudit, "Well done, good and faithful servants."

THE GRANGE.

The Grange is a society of farmers, having for its object the advancement of farmers' interests, socially, intellectually and financially, and by its influence to elevate and dignify his calling; to afford our farmers an appropriate means for social entertainment and intellectual improvement; to afford an opportunity for cultivating the mind while cultivating the soil; to place within the farmer's reach the benefits of mutual understanding and united effort; to overcome, through our frequent meetings, the natural isolation common to farmers' lives; to strengthen our attachments to our pursuits—particularly among the young—by making our occupation more agreeable and our home surroundings more attractive, by showing them there is something to live for besides drudgery and toil; that there is time and opportunity for social enjoyment and intellectual improvement; that there is an opportunity to rise to position and honor in the country while holding the handle of a plough. It is designed to bind the farmers together in a fraternal union; to encourage education amongst them, and thus advance to a higher state of perfection the science of agriculture; to elevate and dignify labor, thus promoting the happiness and exalting the position of the laborer, and by a united effort and business-like management of our affairs, to reap more fully the just rewards of industry.

The Grange is a secret society, having passwords, signs, &c. "Its meetings are governed by a Ritual, the

teachings of which are appropriate, pleasing and instructive. None but members are admitted to our meetings, or to a knowledge of our business transactions; this, not because we are ashamed of what we are doing, but in order to better carry out the objects we have in view, to secure unity among our members, and a feeling of confidence, harmony and security. It is not a political or party organization; it being reserved as the right of every Patron to affiliate and support that which will best carry out his principles. We prohibit the discussion of political questions in the Grange room; yet we assert that it is the duty of every citizen to take a proper interest in the politics of his country. "It is his duty to do all he can for his own party, to put down bribery, corruption and trickery, and see that none but competent, faithful and honest men, who will unflinchingly stand by our interests, are nominated for all positions of trust; and to have carried out the principle which should always characterize every Grange member—that the office should seek the man and not the man the office."

The Grange exerts no party, political, or sectarian influence, every member being allowed freedom of political opinion, as well as religious views.

Entomological.

INSECTS INJURIOUS TO THE OAK.

The seventeen-year locust, one of the insects which is more particularly injurious to the oak tree, is in many respects a peculiarity. The description will be interesting. It is designated by naturalists as the *Cicada septendecim*, and is the order *HEMIPTERA*, family *CICADARIÆ*.

It stings the terminal twigs of the oak and other forest trees and of various fruit tree, and deposits its long slender eggs in a broken line along the twig.

Without attempting to recapitulate the history of this famous insect, we would only say that the eggs are deposited from the end of May through June (Fig. 9, d, e) in pairs in the terminal twigs of the oak, &c. The larvae (Fig. 9, f) hatch out in about six weeks after they are deposited, and drop to the ground, in which they live, sucking the roots of trees, &c., for nearly seventeen years; the pupa state (Fig. 9, a, b, c) lasting but a few days.

The following remarks on the habits of this insect are taken from the Third Report on the injurious insects of Massachusetts:

As regards the kind of trees stung by the Cicada I may quote from a communication from William Kite in the *American Naturalist*, vol. ii, p. 412, as confirming and adding somewhat to Dr. Harris's statements: "Seeing in the July number of the *Naturalist* a request for twigs of oaks which had been stung by the so-called seventeen-year locust, I take the liberty of sending you twigs from eleven different varieties of trees in which the females have deposited their eggs. I do this to show that the insect seems indifferent to the kind of wood made use of as a depository of her eggs. These were gathered July 1, in about an hour's time, on the south hills of the 'Great Chester Valley,' Chester Co., Pa. No doubt the number of trees and bushes might be much increased. The female in depositing her eggs, seems to prefer well-matured wood, rejecting the growing branches of this year, and using the last year's wood and frequently that of the year before, as some of the twigs inclosed will show. An orchard which I visited was so badly stung

that the apple trees will be seriously injured, and the peach trees will hardly survive their treatment. Instinct did not seem to caution the animal against using improper depositories, as I found many cherry trees had been used by them, the gum exuding from the wounds, in that case sealing the eggs in beyond escape.

"The males have begun to die, and are found in numbers under the trees; the females are yet busy with their peculiar office. The length of wood perforated on each branch varied from one to two and a half feet averaging probably eighteen inches; these seemed to be the work of one insect on each twig, showing a wonderful fecundity.

"The recurrence of three 'locust-years' is well remembered in this locality—1834, 1851 and 1868. There has been no variation from the usual time, establishing the regularity of their periodical appearance."

As regards the time and mode of hatching, Mr. S. S. Rathvon, of Lancaster, Pa., contributes to the same journal some new and valuable facts, which we quote: "With reference to the eggs and young of the seventeen-

in great numbers, by half a dozen observers in this county. As the fruitful eggs were at least a third larger than they were when first deposited, I infer that they require the moisture contained in living wood to preserve their vitality. When the proper time arrives and the proper conditions are preserved, they are easily bred, and indeed I have seen them evolve on the palm of my hand. The eyes of the young cicadas are seen through the egg-skin before it is broken."

Mr. Riley, in an interesting account of this cicada in his First Annual Report on Noxious, Beneficial and other insects of Missouri for 1869, has shown that in the Southern States thirteen-year broods of this insect are found. He remarks: "It was my good fortune to observe that besides the seventeen-year broods, the appearance of one of which was recorded as long ago as 1633, there are also thirteen-year broods, and that, though both sometimes occur in the same States, yet, in general terms, the seventeen-year broods may be said to belong to the Northern and the thirteen-year broods to the Southern States, the dividing line being about

latitude 38°, though in some places the seventeen-year brood extends below this line, while in Illinois the thirteen-year brood runs up considerably beyond it. It was also exceedingly gratifying to find, four months after I had published this fact, that the same discovery had been made years before by Dr. Smith, though it had never been given to the world."

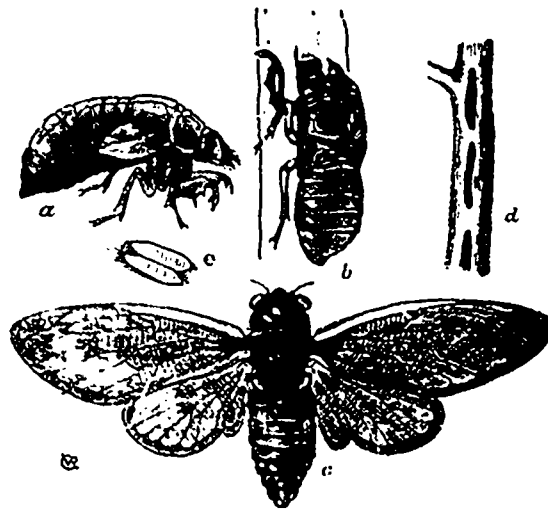
Mr. Riley predicts that in Southern New England a brood will appear in 1877 and 1885. Probably the Plymouth brood, which appeared in 1872, will not appear again for seventeen years, namely, in 1889, the two broods noticed by Riley appearing west of this town. As regards its appearance in Plymouth, Mass., Harris states that it appeared there in 1633. The next date given is 1804, "but, if the exact period of seventeen years had been observed, they should have returned in 1803."

Mr. B. M. Watson informs me, from his personal observation, that it also appeared in 1838, 1855 and 1872. In Sandwich it appeared in 1787, 1804 and 1821. In Fall River it appeared in 1834, in Hadley in 1818, in Bristol County in 1784, so that, as remarked by Harris and others, it appears at different years in places not far from each other. So that while in Plymouth and Sandwich we may look for its reappearance in 1889, in Fall River it will come in 1885, or four years earlier.

There are three species of Cicada in the Northern States, and, in order that they may not be confounded in studying the times of appearance of the different broods of the seventeen-year species, I add a short description of each form, so that they may be readily recognized in the winged and immature states.

The two larger species are the seventeen-year locust (*Cicada septendecim*) and the dog-day cicada (*C. pruinosa*). Fig. 9, copied from Riley's report, gives

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The seventeen-year Cicada and pupa: a, b, d position of eggs (e) larva. After Reilly.

year cicada, your correspondent from Haverford College, Philadelphia, is not the only one who has failed to produce the young by keeping branches containing eggs in their studios. I so failed in 1854 and 1851, and indeed I have never heard that any one has succeeded in that way, who has kept them for any great length of time. In the brood of 1868, the first cicadas appeared here in a body, on the evening of the second day of June. The first pair in *cicada*, I observed on the 21st, and the first female depositing on the 26th of the same month. The first young were excluded on the 5th of August. All these dates are some ten days later than corresponding observations made by myself and others in former years. On the 15th of July I cut off some apple, pear and chestnut twigs containing eggs, and stuck the ends into a bottle containing water, and set it in a broad, shallow dish, also filled with water, the whole remaining out of doors exposed to the weather, whatever it might be. The young continued to drop out on the water in the dish for a full week, after the date above mentioned. I could breed no cicadas from branches that were dead and on which the leaves were withered, nor from those that from any cause had fallen to the ground, and this was also the case with Mr. Vincent Bernier, of Kennet Square, Chester Co., Pa. After the precise time was known, fresh branches were obtained, and then the young cicadas were seen coming forth