

of injured trees. Recently specimens were received from Dr. Fletcher with the following statement in the letter accompanying them :

" I now send you a few specimens and will ask you for a line or two on them. It is named *Xyleborus saxeseni* by European specialists, and is doing considerable harm to plum trees in England. Miss Ormerod showed me the work and gave me the specimen. I told her . . . I would submit it to you. . . . It was alive, with several others of different ages, in a large flat cavity in a plum branch two inches in diameter."

The evidence I have been able to obtain from a somewhat extensive study of the habits of this and other species of *Xyleborus*, leads me to conclude that while they must have moist wood in which to develop a brood and propagate the fungus upon which they feed, they all have a decided preference for that of dead, dying, or at least unhealthy trees, be they standing or felled, and in no instance have I found any species of the genus entering the wood of any part of an uninjured and healthy living tree. Even *X. dispar*, which has been recorded as infesting healthy wood of fruit trees in Europe and this country, has not been observed by me in healthy wood, although I have found examples of a species determined by Eichhoff as *X. dispar* in the wood of a great variety of trees in West Virginia'. *X. xylographus* comes nearer to attacking healthy wood of living trees than any other species I have observed. It will attack living trees, and has been frequently found in apparently healthy sapwood, but in such instances it had entered through the dead or dying wood of a wound or dead spot in the bark of the trunk or branches, as shown in Plate 3, fig. 1.

Even if it did attack perfectly healthy trees, it could scarcely be the primary cause of their death, unless the insects should occur in such vast numbers as to completely fill the sapwood with entrance galleries and brood-chambers, which in large trees is hardly possible, and in small trees not at all probable. In fact, they seem to prefer to excavate their brood-chambers in the heartwood, which, as is well known, is not a vital part of the plant structure. If the healthy living sapwood is penetrated at

1. This statement is not meant to even suggest the inaccuracy of the records of other writers, since I have reasons for doubting that the species I observed is a true *X. dispar*, and even if it is, habits of the same insect may differ under different environments.